TEXAS State Journal of Medicine

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH IN TEXAS

VOLUME 54 • NUMBER 9 • SEPTEMBER, 1958

BOARD OF PUBLICATION

Robert W. Kimbro, M. D., Cleburne, Chairman
G. V. Brindley, M. D., Temple
Byron P. York, M. D., Houston
Troy A. Shafer, M. D., Harlingen
J. B. Copeland, M. D., San Antonio

•

Howard O. Smith, M. D., Marlin
President

•

EDITORIAL AND BUSINESS OFFICES

1801 North Lamar Blvd., Austin
Telephone: GReenwood 7-9447

C. Lincoln Williston, Executive Secretary
Harriet Cunningham, Managing Editor
E. Maxwell Jones, Business Manager
Jon R. Hornaday, Advertising Manager

•

PRINTING OFFICES

1114 West Daggett, Fort Worth 1

•

Subscriptions: $3 per year for members; $6 for nonmembers; $7 for foreign. Single copy: 75 cents.

Copyright 1958 by the Texas Medical Association. Owned and issued monthly by the Association.

Postgraduate Medical Education

The primary purpose of today's unprecedented world-wide effort in medical research is to improve the health and well-being of people. The mechanism which transmits this knowledge from the laboratories to the people is medical education. The physician throughout all phases of his training and particularly in his residency training and practice is the critical link. So rapidly do the medical sciences move forward, the physician knows that only by scholarly diligence, periodic attendance at specially designed courses, and frequent contacts with centers of medical research and practice can he hope to keep abreast of new developments. The young physician going into practice now recognizes the excellent formal training which he began 10 years ago is merely the beginning of a foundation which is in constant need of shoring, replacement, and refurbishing. Changes and developments are occurring rapidly.

Within the lives of physicians now in practice, three epochs—military and civil defense medicine, atomic medicine, and space medicine—have in rapid succession created the need for the dissemination of new medical knowledge. Research in the medical sciences stimulated by an unprecedented desire to conquer disease and supported by funds in excess of $400,000,000 for the year 1957 has contributed to the rate of medical progress. Employment of the team approach to problems, the widespread acceptance of the inter-institutional cooperative groups, and the use of the statistical approach in program design and analysis by computer machine techniques are but a few of the developments in research techniques.

Medical educators generally until recently have not directed their attention to postgraduate medical education, the important third phase of medical education, that is, a continuation of undergraduate and graduate medical education. What have they found? Physicians with maturity and variable working knowledge of the medical sciences, motivated not by the desire for an advanced degree or a certificate, but keenly aware of the responsibility to keep abreast in a field which is increasing in complexity day by day—physicians who recognize that their learning days as interns are over, that their medical educational problems are unique and require special educational techniques. On the other hand, they have found an ever lengthening lag in the application of newer knowledge —physicians poorly indoctrinated with the concept that medicine demands scholarly life-long learning — inadequate training opportunities varying in quality, variously sponsored, poorly distributed, and weighted heavily in specialized subjects with an emphasis on programs known to attract large audiences.

The medical schools, medical groups and clinics all over the state; annual medical assemblies in San Antonio, Dallas, and Houston; the educational programs of the Texas Medical Association, the Texas Academy of General Practice, state and local medical societies; hospital programs; and physicians in conference and through consultation have been making a tremendous contribution in disseminating scientific medical information. However, prior to World War II nowhere in the state was there a coordinated program designed to meet the unique needs of the practicing physician.

As early as May, 1943, a forthright approach was taken by the University of Texas with plans to meet this challenge. That Texans were alert to the need is again attested by the organization of the University of Texas Postgraduate School of Medicine in the Texas Medical Center, Houston, in 1948 with the University of Texas M. D. Anderson Hospital and Tumor Institute designated as the first teaching hospital of the school. One of the school's principal responsibilities as set forth by the board of regents of the University of Texas was that of coordinating the postgraduate efforts between the medical units of the University in the statewide program envisioned by the board of regents; hence the medical facilities of the University of Texas were coordinated to provide teaching, research, and public service for the commonwealth on a far-reaching scale and to provide a unique opportunity for the physician interested in any phase of postgraduate medicine.

Today the program of the school has three approaches: (1) provisions for continuation and refresher training for physicians in the general practice of medicine and the specialties; (2) the development of hospital educational programs and resident training programs where feasible among the schools' affiliated hospitals; and (3) provisions of facilities for physicians desirous of pursuing research in the medical sciences. The program is basically aimed at improving medical care in Texas through the young physician and the physician in practice.

The school thus far has operated without funds from the state. In excess of 50 per cent of its operating funds have been provided by the M. D. Anderson Foundation. The school's program, solely supported by private grants, tuition derived from courses for physicians, the generous contribution of hospitals in terms of facilities and "free beds," and its volunteer faculty of 631 drawn from throughout the state, is making a substantial contribution to the health of Texans.

The medical people of the state must recognize the challenge of the needs in postgraduate medical education and give it support and participation. Working together, medical educators and practicing physicians can help in establishing a sound educational program from which the young physician, the practicing physician, and the public alike will benefit.

—GRANT TAYLOR, M.D., Houston.

Health Surveys Among Physicians

All screening tests of physicians performed during medical conventions are conveying several messages important for the conscience of individual physicians.

1. A 3 year survey of physicians attending the last three conventions of the American Medical Association shows a case finding rate of cardiac and chest diseases which is higher than that found in the general population.* Glaucoma detection screening at the American Medical Association convention in New York in 1957 showed a much higher ratio of persons having suspiciously high intraocular pressure (4.2 per cent) than in community-wide glaucoma surveys (approximately 2 per cent in persons past 40 years of age).

A glaucoma survey done at the 1958 annual meeting of the Texas Medical Association showed the following results:

Potential estimated number of visitors at the exhibit	2,000
Persons screened	58
Passed	41
Failed	17
Reasons for failure	
Abnormality of intraocular pressure	8 (13.7%)
Poor corrected distance visual acuity	9

An explanation of the unusually high case finding among physicians could be the fact that only physicians having suspicious signs and symptoms are attracted to have a screening done on themselves. This opinion was borne out by a high incidence of suspicious histories among physicians screened for glaucoma in the Texas survey.

2. The ratio of physicians who avail themselves of such a convenient opportunity of screening their own health is fairly small (2.7 per cent of all physicians attending the American Medical Association convention and 2.9 per cent of all physicians attending the Texas meeting).

3. An attempt was made to evaluate the validity of the screening procedure using ophthalmologists' reports of their regular examinations of all persons failing the screening test as a standard. Two separate requests for such reports showed only a small response.

Various aspects of these health surveys show common traits of human behavior and prove the necessity for continued education of physicians.

—Otto Lippmann, M.D., Austin.

*McArthur, C. E.: *Chairman's Address, Section on General Practice, A.M.A. Annual Session, San Francisco, 1958.*

Look Again

Are too many readers of the *Journal* overlooking some of its features that might be interesting or helpful?

A questionnaire sent to a random sampling of 500 readers of the *Journal* the end of July brought an excellent percentage of replies—better than 30 per cent—and suggested that perhaps some readers are missing items their colleagues like. For example, a fair proportion of those who indicated they read the drug notes contributions by Herbert Schwartz that have appeared in the news pages of each issue since April stated that they like this material. The same response was true of those who read the medical history articles that have been featured from time to time in the library section. Yet the percentage of all those who responded who said they read these items is not large. Inasmuch as these are comparatively new features, perhaps some readers simply have failed to know they are there.

Another thing which may not have been noted is the membership list in the July *Journal* with its new tear-out arrangement so that the list can be separated from the rest of the *Journal* for handy use as a separate booklet.

It is encouraging to learn that in this day of heavy schedules and a superfluity of medical literature, the *Texas State Journal of Medicine* is read a minimum of an hour each month by half of those who receive it—assuming that the physicians who responded to the question-

naire are typical. Many others reported devoting a half hour or 45 minutes to each issue.

Other answers to questions in the survey are being considered carefully for guidance in future planning for the *Journal.* Through the reaction to these questions, the comments written on the survey sheets, and the suggestions and constructive criticisms that come through letters and in conversation, the physicians and staff members responsible for preparing the *Journal* are helped immeasurably in their efforts to produce a periodical of high standard geared to the needs of as many Texas physicians as possible.

Positive PR

"Accentuate the positive" means more than words from a once popular song to the physicians of the Laredo area. They are busy accentuating a positive program for the youth of the community which will lead to healthier, safer boys and girls and incidentally build good will for the medical profession.

The program sponsored by Webb-Zapata-Jim Hogg Counties Medical Society was one of six effective public relations projects of county societies reported on during the Public Relations Conference held at the Texas Medical Association building in Austin September 6.

Sponsorship of city regulations banning the use and sale of fireworks and prohibiting the abandonment of empty ice boxes and cabinets; free physical examinations for members of the Laredo Boys' Club, Golden Gloves fighters, and Boy Scout campers; sponsorship of a Babe Ruth baseball team; demonstration of resuscitative measures at local swimming pools; and cooperation in development of a compulsory driver training course for all high school students by giving demonstration lectures to illustrate mutilating injuries received in automobile accidents; sponsorship of a Soap Box Derby entry—these are projects appropriate for medical society interest and infinitely worth while in the community.

Unfortunately, the medical profession in the minds of many laymen has the reputation of being "agin" everything. Time, energy, funds, and enthusiasm spent on positive programs such as those in Laredo and the other areas cited at the conference can help to dispel that impression and simultaneously bring great satisfaction to the doctors themselves.

Texas Medical Association
Conference of County Society Officials
Symposium on Legislation, and Orientation Program
January 24, 1959—Austin

Executive Council—January 25, 1959

See Organization Section for Review of Public Relations Conference, Orientation Program, Executive Council, and Woman's Auxiliary School of Instruction.

President's Page

A VITAL ELEMENT

DR. SMITH

Every physician's prescription contains a vital element without which the patient might not respond to the specific prescribed. It is the intangible attribute of the patient's confidence in his doctor's skill and ability to bring him back to health.

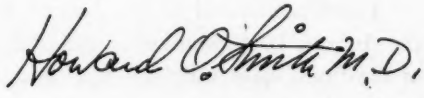
This element is so powerful that physicians since time immemorial have recognized that they first must establish a firm relationship of confidence in their treatment of the ill. In other words it means that the presence of the doctor must be the first part of the cure. What a wonderful thing it is for a patient to look upon his physician not only as a doctor, but as a friend, in fact not making a distinction between the two. It has been said nature, time, and patience are the three great physicians. We know, however, that a solid foundation of training, some natural talent and skill, and with it all a love of humanity and of the profession lead to making a good doctor.

How many things enter into this complex which makes the great physician? We must realize the far-reaching effects of our speech and action, not only on the public, but on all of us as members of our medical societies. Some physicians have little or no concern for their colleagues. When a patient is disgruntled or dissatisfied with good reason or with no reason, every physician in the society is in some part accountable. We really are our brother's keeper. Being members of our guild, we are responsible for and to each other.

I can recommend to you Andrew B. Small's "President's Page" in the August, 1958, number of the *Dallas Medical Journal.* This is one of the finest short articles I have ever read on medical ethics. He reiterates that in everything we say and do, we must take into consideration other members of the profession. If a patient is referred to you for consultation or treatment, the importance of a prompt report of

findings and of returning the patient to his own physician can not be overemphasized. Nowhere in medicine are there situations more delicate, subject to misunderstandings and fraught with danger, than in consultations. These challenge the patience, skill, knowledge, and tact of both the consultant and the one seeking advice. How often we realize without always giving the matter due credit that patients can be treated in several different ways, frequently with the same good results. We may not always agree with what the last physician did, and at times definitely disagree, but one should consider well and with good judgment any comments made of the other physician's methods and results. A criticism directed toward a colleague may damage him, the patient, you, and the profession, and the basis for such criticism may be used some day to bring judgment upon others. It is really frightening how often these simple principles are overlooked.

It behooves each of us to remember and repeat in our hearts: "Let the words of my mouth, and the meditations of my heart, be acceptable in thy sight, O Lord, my strength and my redeemer," as well as my actions when I approach my patients day after day. Many of them come with a multitude of complaints, some real, some functional, some organic, but all come to the physician. If you have ever placed yourself in the hands of a physician because of a serious complaint, you immediately become aware of how much his attitude and skill mean to you—a word kindly spoken, a simple smile, and a firm grasp of the situation after listening to your history and your complaints of illness or of sorrows. These create a climate in which healing is most likely to occur.



ORIGINAL ARTICLES

Potentialities of Electron Microscopy For Medicine

Role in Ultrastructural And Molecular Pathology

**J. M. HILL, M.D.;
ALICE L. SMITH, M.D.;
MORTON D. PRAGER, Ph.D.; and
EMIL SANDERS**

Dallas, Texas

JUST A CENTURY ago a concept of disease which has served as the foundation of modern medicine was proposed by Virchow in his book, "Cellular Pathology." His studies of the organs and tissues from the bodies of the sick by means of the compound microscope revealed that the cell appeared to be the ultimate and essential unit in the reaction of the body to injury which we call disease. In the past century the pathologist working at the cellular level has made enormous contributions to the understanding of the nature of illness in man. However, not all problems of disease have yielded to this type of microscopic study. Indeed other medical sciences, such as immunology, genetics, and particularly chemistry, have been making exciting progress in their study of ultracellular entities down to the molecular level.

Recently, ultrathin sectioning techniques for electron microscopy have been perfected to the point where our understanding of ultracellular organization is making rapid strides; for example, correlations between cellular structures and such intracellular activities as specific enzyme reactions can be made. The actual cataloguing of the sites of many of these reactions in the cell has been accomplished. Normal standards of function and structure now are being established at ultracellular and molecular levels, and these can serve as the background for the possible evolution of a molecular pathology which could result in new horizons for medicine. The architects of this new pathology no doubt will represent many different scientific disciplines.

Dr. J. M. Hill and his coauthors are from the J. K. and Susie L. Wadley Research Institute and Blood Bank, Department of Pathology of the University of Texas Southwestern Medical School, and Hematology Service of Baylor University Hospital. The paper is modified from a presentation before the Section on Pathology at the annual session of the Texas Medical Association, April 22, 1958, in Houston.

Normal standards of function and structure at the ultracellular and molecular levels are being established as a result of recently developed ultrathin sectioning techniques for electron microscopy. Examples of electron micrographs of bone marrow illustrate the result of some of the newer techniques.

The purpose of this paper is to present electron micrographs illustrating the result of several techniques and approaches to the examination of various cells and cellular components obtained from normal and diseased persons.

RESOLVING POWER AND MAGNIFICATION

Comparison of the capabilities of the electron microscope with the light microscope together with some data on the size of various objects with units of measurement may be useful at this point. Hall[6] has estimated a theoretical resolving power of 4 angstrom units (Å) for the electron microscope, but in practice resolution below 20 Å (0.002 micron) is seldom achieved. With white light, the oil immersion microscope lens can achieve a resolution of about 2000 Å or 0.2 micron. The useful magnification of the light microscope is limited to approximately 1,000 diameters and the electron microscope to about 100,000 diameters. Ordinarily, both instruments are used at one-half or less of this magnification. Figure 1 compares objects ranging in size from the red blood cell to the hydrogen molecule expressed in three commonly used units of measurement.

BIOLOGICAL OBJECT		DIAMETER		
		MICRONS μ	MILLIMICRONS mμ	ANGSTROM UNITS Å
Erythrocyte	●	7.5	7500	75,000
Rickettsia	●	0.75	750	7500
Influenza virus	•	0.10	100	1000
Equine Encephalitis	·	0.038	38	380
Poliomyelitis virus	·	0.012	12	120
Hb. molecule	·	0.015 x 0.003	15 x 3	150 x 30
Hydrogen molecule	·	0.0001	0.1	1

Fig. 1. Comparative sizes of biological objects.

MATERIALS AND METHODS

Bone marrow specimens for ultrathin sectioning were obtained by sternal puncture and placed in potassium dichromate buffered osmic acid for 2 hours' fixation at room temperature.[3] Dehydration was carried out in graded alcohols. The specimen was embedded in a 9:1 mixture of butyl and methyl methacrylate, which was polymerized with benzoyl peroxide at 50 C. for 12 hours. Ultrathin sections of 100 to 200 Å thickness were cut with glass knives on a Porter-Blum microtome[10] and were examined on an RCA-EMU 2B electron microscope modified with addition of externally centerable objective and condenser apertures and compensated pole pieces.

Electron microscope studies with methods other than thin section are also valuable. For example, bacteria, viruses, plasma membranes of erythrocytes, and other structures may be studied in preparations of suitable dilute suspensions dried on collodion or formvar films. Shadowcasting with heavy metals such as palladium, uranium, or gold may be used to increase contrast with improvement of definition and production of three dimensional effects. Bessis[1] has described many of these special techniques.

CELLULAR ULTRASTRUCTURE

A comparison of general cellular structure revealed by the light microscope and the electron microscope, as shown by figures 2 and 3, clearly demonstrates the superiority of the latter instrument for study of ultrastructure. A plasma cell taken from a case of plasma cell leukemia is shown at the same magnification in both pictures. Even with color, the light microscope shows only the usual coarse texture of purple chroma-

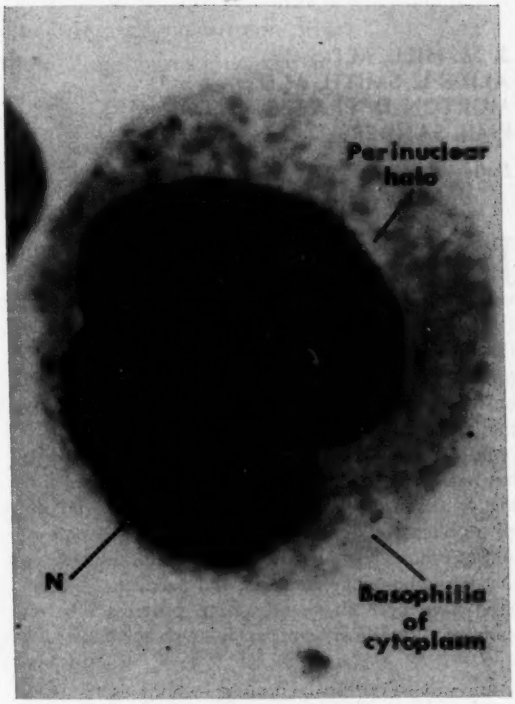


Fig. 2. Leukemic cell from plasma cell leukemia. Photomicrograph from Wright-stained film taken with 113 x oil immersion apochromatic objective N. A. 1.30. Note the empty magnification effect and limitation of resolving power in nucleus (N) and cytoplasm compared with figure 3. Reduced from x 19,200.

tin in a slightly eccentric nucleus, and a cytoplasm exhibiting a perinuclear halo and a variable degree of basophilia or speckling (negative images of organelles?).

By contrast an electron micrograph of an identical type of cell from the same case shows great richness and complexity of structural detail within the cell. Even the cell membrane exhibits numerous irregular projections and indentations, some of which appear to communicate with the system of cytoplasmic channels designated as the endoplasmic reticulum by Porter and Kallman.[11] The number and complexity of these channels are highly characteristic of the plasma cell. Various profiles of the endoplasmic reticulum exhibit circular, cylindrical, and irregular figures. These figures may be smooth or have tiny dense granules (granules of Palade)[9] on their external surfaces. These granules, which also may be free in the cytoplasm, are commonly considered to be ribonucleic acid molecules or groups of molecules. The degree of cytoplasmic basophilia in cells has been correlated with the amount of ribonucleic acid (granules of Palade) while the irregular cytoplasmic granularity or speckling as seen by the light microscope is correlated with endoplasmic profiles, mitochondria, and other cytoplasmic ultrastructures. Since these ultrastructures do not stain well with routine preparations they are represented by negative images in the ordinary microscopic examination when large enough to be resolved. Perhaps the smaller components contribute a more diffuse light scattering below the resolving power of the microscope.

The mitochondria (fig. 3) are perhaps the most prominent of the organelles of the cell. Their arrangement, number, and size are important in cytologic characterization. They form distinct structural units easily separated from other cytoplasmic com-

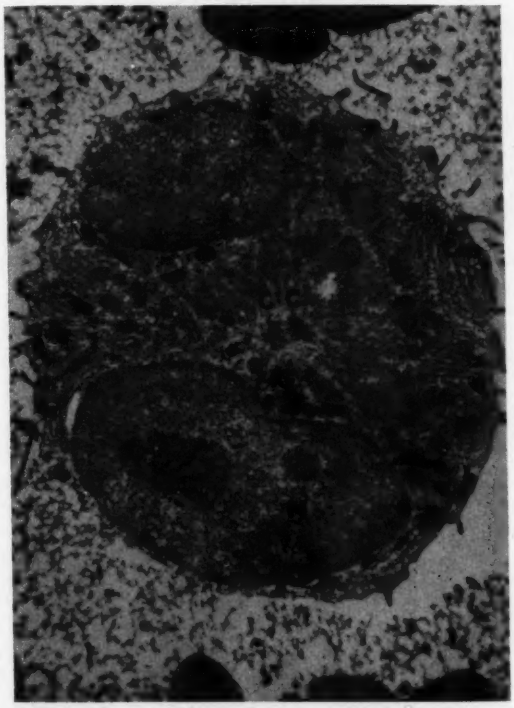


Fig. 3. Electron micrograph of cell from a case of acute plasma cell leukemia in a 68 year old woman (same case as figure 2). Cytoplasm shows highly developed endoplasmic reticulum (Er) characteristic of the plasma cell. Note numerous elongated compressed profiles often showing palisaded arrangement. Granules of Palade (P) adherent to outer surface of endoplasmic membranes are prominent. Numerous, relatively dense mitochondria (M) are scattered throughout the cell. Note Golgi apparatus (G) made up of smooth walled microvesicles in the region around the centriole (C). Centrioles (C) show as hollow cylinders, one in longitudinal and the other in cross-section. The nucleus (N) shows a prominent nucleolus (Nu) with dense reticular structure. Observe the complexity of plasma or cell membrane (Cm) with slender projections and invaginations. The arrow indicates an area of communication between the plasma membrane and one of the channels of the endoplasmic reticulum. Reduced from x 19,200.

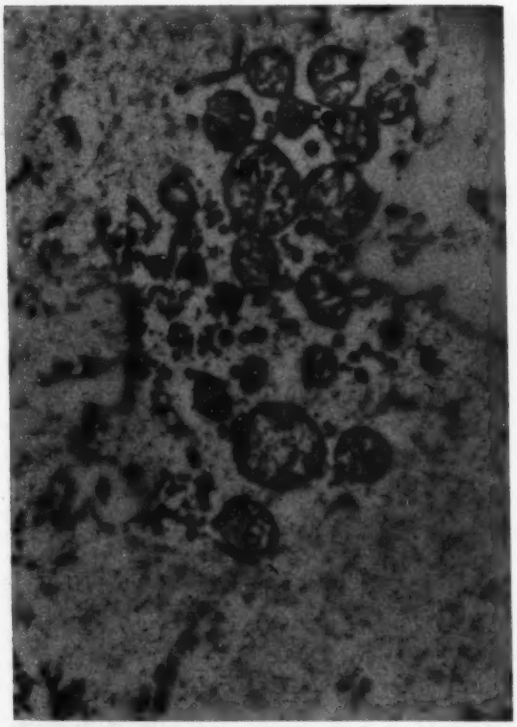


Fig. 4. Mitochondrial (M) fraction, also showing cristae (Ce). Homogenate prepared from cells of peripheral blood of a case of acute lymphatic leukemia (190,000 leukocytes per cubic millimeter with 71 per cent lymphoblasts). Reduced from x 44,000.

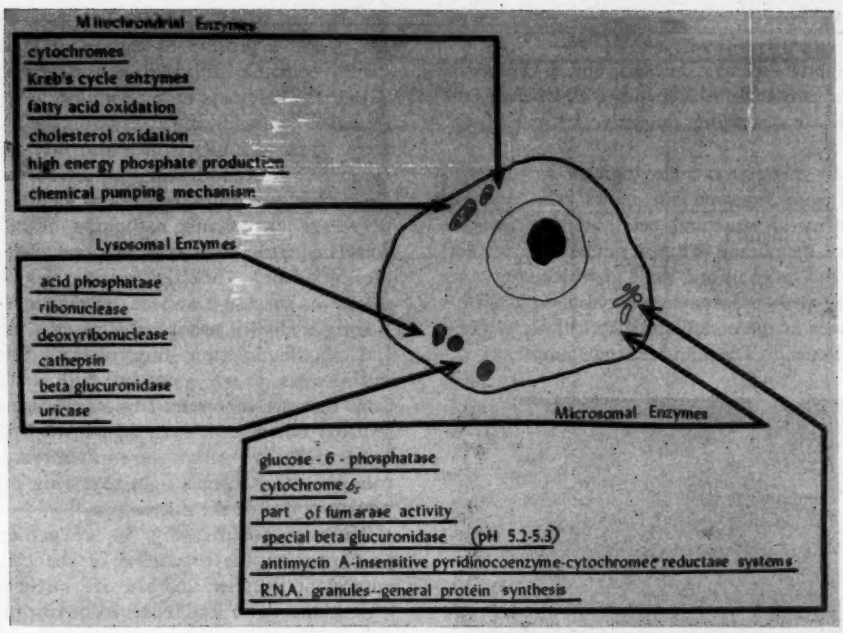


Fig. 5. Schematic correlation of ultrastructure and metabolic functions.

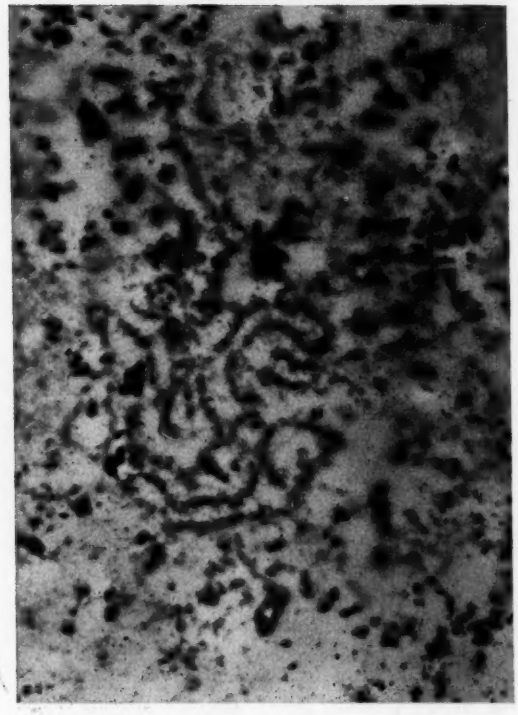


Fig. 6. Microsomal fraction from ultracentrifugation of supernatant of mitochondrial fraction of figure 4. Reduced from x 39,000.

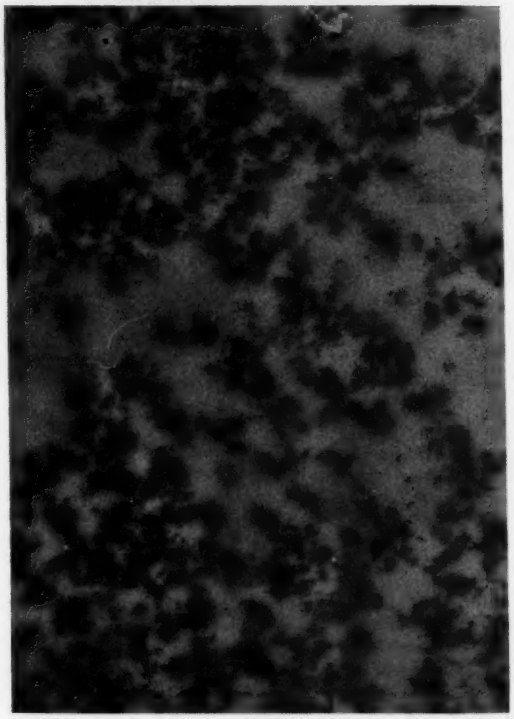


Fig. 7. Postmicrosomal fraction from the case as figures 4 and 6, after prolonged ultracentrifugation. Reduced from x 44,000.

ponents for biochemical study. These usually ovoid structures are made up of a dense double layered membrane. The inner layer has transverse invaginations forming double layered septums of various lengths termed cristae (fig. 4 and 9).

The centrioles (fig. 3) are thought to be hollow cylinders about 1,000 Å (0.10 micron) in diameter with small projections extending about 500 Å from the surface. The long axes of the centriole cylinders seem to lie perpendicular to each other. The formation of the mitotic spindle and astral rays may be a function of these structures.

Another cytoplasmic component, the Golgi apparatus (fig. 3), is demonstrated by the electron microscope to consist of a system of smooth walled microvesicles, vacuoles, and closely packed membranes surrounding the location of the centrioles. It has been suggested that Golgi structures are a part of a continuous system of membranes extending from nucleus to cell surface.[7] This interesting concept of one complex membrane system in the cell with four components, namely, the plasma membrane, the system of membranous structures with ribonucleic acid granules, the Golgi system, and the membrane of the nucleus, implies differentiation to perform different functions.

The study of the structure of the nucleus so far has appeared less rewarding than the study of the cytoplasm. However, nucleoli are well demonstrated and may show considerable structure as in the plasma cell of figure 3. The nuclear membrane may be shown in sufficient detail to exhibit its double layer and discontinuities or pores. Coarser chromatin condensations in the nucleus are shown as with the light microscope, but actual chromosomal structures such

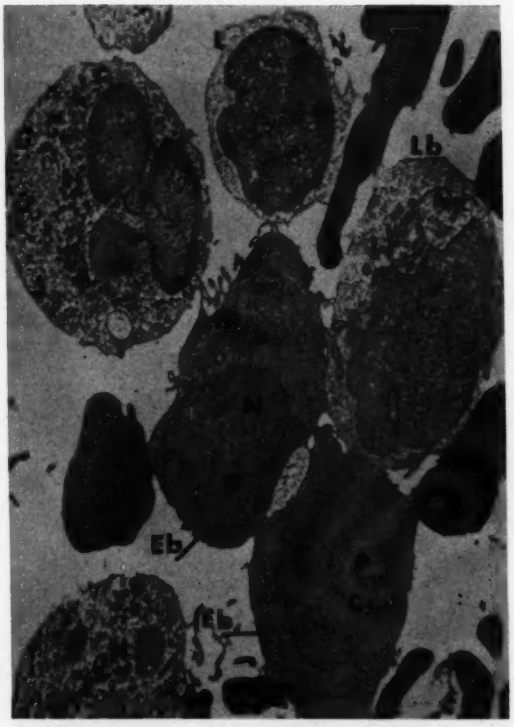


Fig. 8. Group of cells from the bone marrow of a 4 year old boy with acute lymphatic leukemia. Note the segmented neutrophil (N) with delicate filament connecting lobes of the nucleus and a normal complement of specific neutrophilic granules. Erythroblasts (Eb) show partial saturation with hemoglobin, groups of relatively small mitochondria (M), and scant endoplasmic reticulum. Nuclei of these cells show chromatin condensations (Cr) especially at perinuclear membranes. A mature lymphocyte (L) shows the usual large masses of condensed chromatin in the nucleus and a relatively clear cytoplasm almost devoid of organelles. The deep infolding of the nucleus and other details of the lymphoblast (Lb) are better seen in figure 11. Reduced from x 13,200.

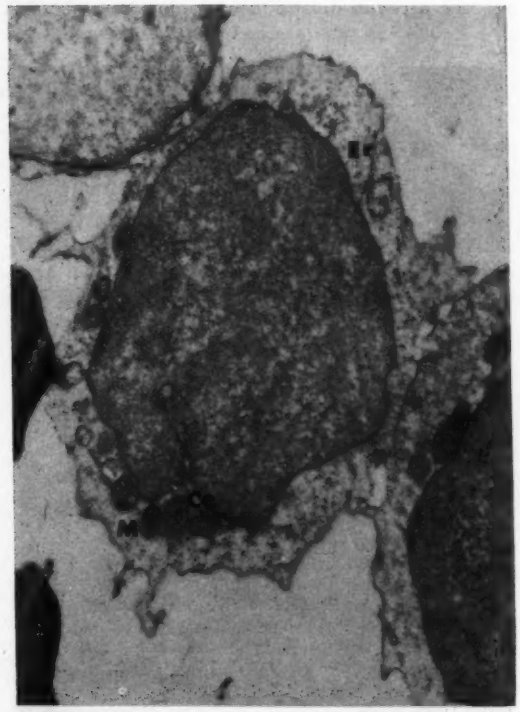


Fig. 9. Leukemic cell from same case as figure 8. Note the moderate number of large, dense mitochondria (M), cristae (Ce), and relatively clear cytoplasm with a very few scattered small membranous profiles of endoplasmic reticulum (Er). Nuclear chromatin has granular and reticulated structure without the definite condensations seen in mature lymphocytes. A deep, narrow indentation or cleft in the nucleus is characteristic of these leukemic cells. Reduced from x 27,500.

as deoxyribonucleic acid spiral configurations are not brought out. For more detailed information concerning the ultrastructure of cells, reference should be made to comprehensive articles such as that of Howatson and Ham.[7]

Considerable progress had been made in the biochemical study of ultracentrifugal fractions of cells prior to any comprehensive study of thin section electron micrographs. In this type of centrifuge, plastic tubes containing homogenized white cells are spun at speeds up to 60,000 rpm in a vacuum chamber. Structures within the cell are easily separated by the various forces generated by speeds of a few thousand rpm up to the maximum. Some rather definite enzyme systems and activities have been assigned to the structural component easily identified in thin section as the mitochondrion. Other ultracentrifugal fractions such as the microsomal have been correlated only recently with part of the complex membrane system within the cytoplasm. It is beyond the scope of this paper to discuss the enzymology of the cell. However, figure 5 represents a composite of intracellular enzyme systems correlated with ultrastructural components. These correlations are derived largely from experimental studies of rat liver cell fractions prepared by ultracentrifugation.[4, 8]

Figure 4 shows mitochondria in ultrathin section prepared in our laboratory from ultracentrifugal fractionation of leukocytes from a case of acute lymphatic leukemia. Figure 6 shows the microsomal fraction from the same preparation. Figure 7, a postmicrosomal fraction obtained by prolonged centrifugation at 105,000 times gravity shows very small uniform spherical particles (granules of Palade?) about 100 Å in diameter. Studies of such ultracentrifugal fractions correlated with biochemical studies as well as electron microscopic observations on normal and neoplastic cells should contribute to new concepts of malignant disease.

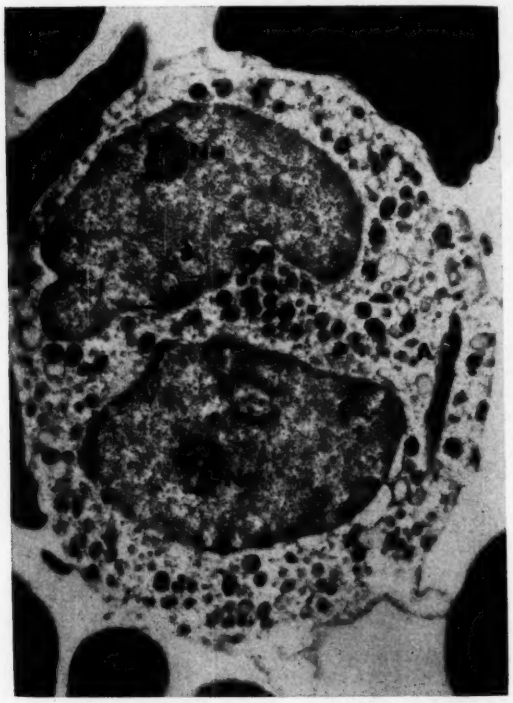


Fig. 10. Leukemic neutrophilic myelocyte from a woman aged 64 with acute granulocytic leukemia. Note the longitudinal section of Auer rod (A), myelocytic granules (N), and scattered circular profiles of endoplasmic reticulum (Er). Prominent dense nucleoli (Nu) and chromatin condensations (Cr) along perinuclear membrane are seen within the nucleus. Reduced from x 31,200.

Fig. 11. Early promyelocyte from the same case as figure 10. Well developed endoplasmic reticulum (Er) with numerous profiles from small tubular to large cisternal types with relatively smooth external surfaces. There is a moderate number of medium sized mitochondria (M) in the cytoplasm within the deep nuclear cleft. Note a few scattered, rather pale, small granules (Gr). The nuclear structure is very homogeneous with a uniform fine reticulated arrangement. One small nucleolus (Nu) is present. The perinuclear membrane shows a double character and occasional pores in original print. Reduced from x 27,500.

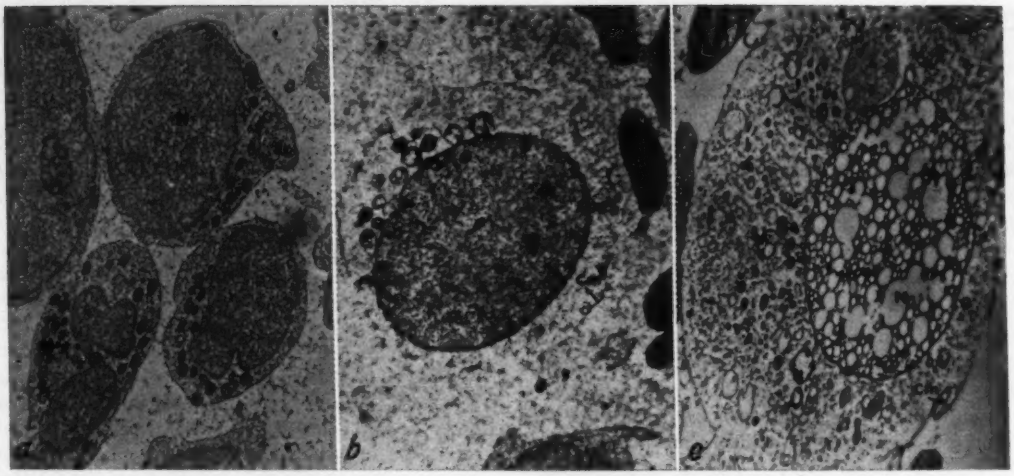


Fig. 12. These micrographs show successive degenerative changes in myeloblasts from a case of acute granulocytic leukemia. The changes occurred after administration of 18 Gm. of prednisolone. (Meticortelone, brand of prednisolone, supplied by Schering Corporation.)

a. An untreated myeloblast rich in small mitochondria (M), scanty endoplasmic reticulum (Er), and homogeneous nuclei (N). Reduced from x 21,200.

b. Early degenerative changes represented by hydropic degeneration of mitochondria, increased or coarsened granularity of nucleus, and discontinuities in plasma or cell membrane (Cm). Reduced from x 27,500.

c. A vacuolated, necrotic cell at onset of clinical and hematological remission. Reduced from x 27,500.

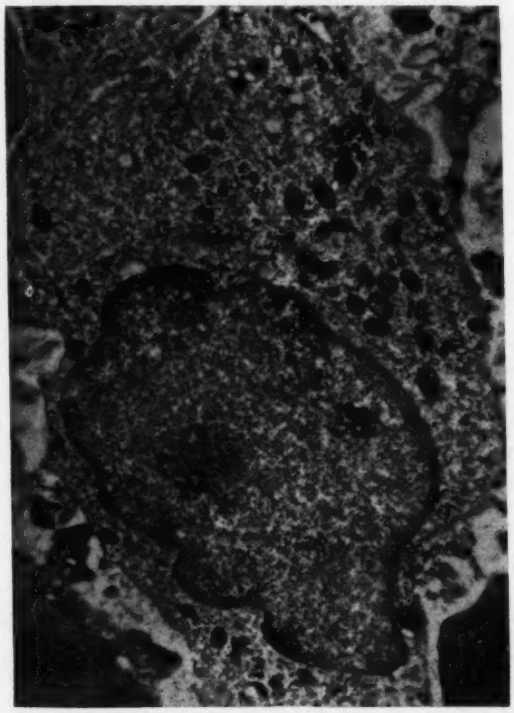


Fig. 13. Cell from a case of acute monocytic leukemia in a 63 year old woman. Note the large size and irregular outline of this cell. The cytoplasmic structure is very complex with numerous components. Small mitochondria (M) and numerous small tubular profiles with moderately granulated external surfaces are visible. The Golgi apparatus (G) consists of smooth walled microvesicles with a suggestion of palisading of flattened profiles of the system. A moderate number of widely scattered spherical granules (Gr) with considerable variation in size represents the azurophil granules of Wright-stained films. The nuclear structure shows coarse reticulation with chromatin condensation (Cr) along the perinuclear membrane. Note two nucleoli (Nu) composed of dense granular material arranged in anastomosing cords. Reduced from x 27,500.

DISCUSSION

A structural basis for metabolic functions within the cell seems to be emerging from correlation of biochemical and fine structure cytological studies. Consideration of the general correlations in figure 5 seems to indicate a remarkable organization of related functions in given cytoplasmic components. For example, the mitochondria with their role in cellular oxidation may well be considered as the "powerhouse" of the cell. Further illustration of the importance of molecular organization is the critical alignment of the several cytochromes along the membranes of the mitochondrial cristae. The Golgi apparatus is not as well understood. However, this system has been related to secretory activity,[5] and in glandular cells such as pancreatic acinar cells, hypertrophy of the Golgi apparatus is seen with hypersecretion whereas atrophy is observed with hyposecretion. The granules of Palade, which may be free in the cytoplasm or adherent to the profiles of the endoplasmic reticulum, are thought to play an important role in the biosynthesis of proteins. On the other hand, mem-

branous portions of the endoplasmic reticulum may be concerned with special protein secretory activity. For example, the highly developed endoplasmic reticulum in the normal plasma cell has been correlated experimentally with antibody formation.[2] Similarly, the abnormal proteins found in the plasma of patients with myeloma seem to relate well to the exceptional differentiation of the endoplasmic reticulum of the myeloma (plasma) cells.[6a]

The excellent ultrastructural studies which have been made already have set the stage for the development of a better understanding of disease through extension of pathology. The essence of this process will require close correlation with the clinical course of the patient. Eventually, the information amassed from multiple observations should develop into an ultrastructural or molecular pathology.

SUMMARY

The possible role of electron microscopy in medicine and in pathology in particular has been emphasized. Typical cellular ultrastructural components have been described and illustrated. A series of electron micrographs from cells of leukemic patients has been presented.

REFERENCES

1. Bessis, M.: Cytology of Blood and Blood-Forming Organs, New York, Grune & Stratton, 1956.
2. Braunsteiner, H., and Pakesch, F.: Electron Microscopy and Functional Significance of New Cellular Structure in Plasmocytes: Review, Blood 10:650-654 (June) 1955.
3. Dalton, A. J.: Chrome-Osmium Fixative for Electron Microscopy. Abstract of paper presented at 1955 annual session of American Association of Anatomists, Anat. Rec. 121:281 (Feb.) 1955.
4. de Duve, C.; Pressman, B. C.; Gianetto, R.; Wattiaux, R.; and Appelmans, F.: Tissue Fractionation Studies; Intracellular Distribution Patterns of Enzymes in Rat-Liver Tissue, Biochem. J. 60:604-617 (Aug.) 1955.
5. Farquhar, M. G., and Wellings, S. R.: Electron Microscopic Evidence Suggesting Secretory Granule Formation Within Golgi Apparatus, J. Biophys. & Biochem. Cytol 3:319-322 (March 25) 1957.
6. Hall, C. E.: Introduction to Electron Microscopy, New York, McGraw-Hill Book Company, 1953, chap. 7, p. 141.
6a. Hill, J. M.: Unpublished observations.
7. Howatson, A. F., and Ham, A. W.: Fine Structure of Cells, Canad. J. Biochem. & Physiol. 35:549-563 (July) 1957.
8. Novikoff, A. B.; Beaufay, H.; and de Duve, C.: Electron Microscopy of Lysosome-Rich Fractions from Rat Liver, J. Biophys. & Biochem. Cytol. 2:179-185. (Supp.) July 25) 1956.
9. Palade, G. E.: Small Particulate Component of Cytoplasm, J. Biophys. & Biochem. Cytol. 1:59-68 (Jan.) 1955.
10. Porter, K. R., and Blum, J.: Study of Microtomy for Electron Microscopy, Anat. Rec. 117:685-710 (Dec.) 1953.
11. Porter, K. R., and Kallman, F. L.: Significance of Cell Particulates as Seen by Electron Microscopy, Ann. New York Acad. Sc. 54:882-891 (July 10) 1952.

Drs. Hill, Smith, and Prager and Mr. Sanders, Wadley Research Institute and Blood Center, 3600 Gaston Avenue, Dallas 10.

The Challenge of Public Health to The Medical Man

E. G. McGAVRAN, M.D., M.P.H., D.Sc.

Chapel Hill, North Carolina

CONFUSION, misunderstanding, and misrepresentations have long surrounded our profession of public health. Actually, there was little confusion to begin with, but it has been growing and increasing steadily. The confusion started within professional public health circles. We, the full time practitioners and teachers of public health, have not been able to agree upon what is public health. What is its distinctive competence? What is its body of knowledge? What are its purposes and goals? Now, obviously, if we cannot agree, how can we expect the medical and other health professions to understand us and to have confidence in us? How can we expect the public to understand and support us?

Dr. E. G. McGavran, Dean, School of Public Health, University of North Carolina, Chapel Hill, presented this paper before the Texas Chapter, American Association of Public Health Physicians, April 20, 1958, in Houston.

This is the beginning of a three part series in which the author sets forth the concept that public health is the scientific diagnosis and treatment of the community as a patient. This concept is contrary to the misconception that public health is in competition with private medicine in the diagnosis and treatment of individuals.

The trouble is that our public relations have been built upon the tenuous basis of "personal confidence." As individuals we are a pretty fine crowd. As individuals we sell ourselves to medical societies, to public officials, and to others, so that we are not under suspicion. But our profession, public health, is under suspicion—and increasingly so.

DEFINITION

Why? Why can we not agree to state clearly our objectives, our purposes, our goals, our limitations, our distinctive area of competence and body of

knowledge. The public health profession has been divided into two camps. There are the conservatives who think in outdated terms of yesteryear. Public health is "sanitation of environment"; public health is "communicable disease control"; public health is "the care of the indigent"; public health is "preventive medicine." This last definition is today the most common, the most accepted, and the worst of all the definitions. It crops up constantly. But nothing could be further from the truth. Preventive medicine is, and has been for many years, more and more the responsibility of the private practicing physician. No logical line can be drawn between prevention and cure. No wonder organized medicine is on the defensive against public health and preventive medicine as the "first inroads of socialized medicine."

We have the other camp of public health people. Let us call them progressives who attempt to broaden the scope of public health beyond functions, beyond communicable disease, by such definitions as "organized community effort," "the mandate of the people," "the physical-social-emotional well-being of people." These are not definitions. They are blankets under which fall many medical and allied activities. With such definitions there is no competence. There is no body of knowledge. There is no public health profession. And the floodgates of distrust are opened to all the worst fears of organized medicine.

Most public health people belong in neither camp. We cannot limit our competence by function any more than any other profession. But we do recognize our limitations and our responsibility. An old concept in new terms is being accepted rapidly by a large segment of public health workers. This is the concept or definition of public health that states in scientific, comprehensible fashion that public health is the scientific diagnosis and treatment of the community as a patient. Thus, it is distinct from the practice of medicine, the competence and focus of which is the scientific diagnosis and treatment of individuals. With table 1, let us follow the historical development of health science and this concept.

HISTORICAL DEVELOPMENT

There have been many advances in health science during the past 100 years, but there have been only 3 profound changes. These changes can be characterized as eras. Until 1850, health science belonged in what is now called the empirical era. The focus of this era was upon the diagnosis and treatment of symptoms. The patient was bled for fevers, mustard poultices were put upon the painful or offending

TABLE 1.—*Historical Development of Health Science and Public Health Science.*

	Empirical Health Era		Basic Science		Clinical Science		Public Health Science
	1850			1900	Social or preventive medicine Mental and emotional health Physical health	1950	
Philosophy and Purpose	Symptom centered		Bacteria centered Disease centered	↔	Patient centered	↔	Community centered
	Empirical diagnosis and treatment of symptoms		↑ Diagnosis and treatment of disease		Diagnosis and treatment of the total individual		Diagnosis and treatment of the total community (body politic)
Education	Lectures	+	Laboratory	+	Bedside teaching	+	Community-side teaching
	Didactic instruction	+	Laboratory instruction	+	Clinical instruction	+	Clinical public health instruction
	Authoritarian, historical	+	Investigative and laboratory	+	Clinical instructor in hospital	+	Clinical instructor in health department
Research	Historical		Basic laboratory research		Clinical research		Community research
			Development of new tools, measurements, criteria		Development of clinical measurements, diagnostic gadgets, new therapy		Development of community measurements and criteria
Behavioral Science	Unknown		Not needed		Ancillary		Integrated
					Social sciences—an adjunct to medicine		Social sciences, sophisticated skills co-equal with public health science
			Individual activity		Specialty group necessary		Inter-disciplinary team

part, cupping or leeches were used appropriately, ointments were used for ulcers, and herbs for illnesses—all were applied and advocated when symptomatic relief was observed. About 1850 a profound change developed and a new era emerged, the era of basic science. The change was fundamentally a change in focus from diagnosis and treatment of symptoms to the diagnosis and treatment of disease. There was bitter opposition and resistance to this change by many of the eminent medical and health authorities of that day. Despite this opposition, however, this investigative era has become the basis of all modern health science.

At the beginning of the twentieth century another profound change began to develop, and the era of clinical science emerged. The change was fundamentally a change in focus from the diagnosis and treatment of disease to the diagnosis and treatment of the total individual. Scientific clinical medicine with its patient centered concept of the total individual was not accepted easily, nor without battle. For many years the bacteriologists, anatomists, and pathologists argued vehemently that the individual was not an entity but only an aggregate of atoms, electrons, cells, and segments and that one could not "diagnose" an individual; one could only diagnose disease, bacteria, pathologic lesions; one could not treat the whole individual but only broken bones, ulcers, and diseased members, and only in so doing could the individual gain health. It was a long, hard battle that as yet has not been won completely; because, after acceptance of the physical entity of the individual, along came the psychiatrists who insisted upon the physical and mental oneness of the individual—psychosomatic medicine. Later, the recognition of the importance of social medical factors in the health of the whole patient necessitated a knowledge of the family and community impact upon the health of the individual. Scientific clinical medicine today does believe and teach that the whole patient, physical, mental, and social, must be the focal point of medical practice.

The third profound change has developed in recent years, and the era of community health is emerging. The change is fundamentally a change from diagnosis and treatment of the individual to the diagnosis and treatment of the health needs and status of the community as an entity, the scientific diagnosis and treatment of the body politic. Here, too, the major issue is not new gadgets or new functions but a new approach, a new focus, a new science, and a new profession. In scientific public health, we no longer treat the individual—the segment of the community, but the total body politic—mental, physical, social, and economic. We no longer treat individuals who have communicable diseases, but we prevent, control, or eradicate the disease in the body politic. The total patient is our responsibility and not the individuals who are a part of it. Our patient is more than a mere aggregation of individuals, just as the individual is more than an aggregation of cells or segments. This does not mean that we ignore the individual any more than the physician ignores the ulcer or the segment or the disease germ in the individual. The doctor treats the broken hip but only incidentally to the treatment of the person. On occasion, he may not even attempt to set the broken hip, because the total health of the patient is more important, but if he does set the hip he does it only for the purpose of functionally curing the person. The day has passed when we can say the operation was successful but the patient died.

Similarly, public health will have to continue to do many things for individuals that society demands. The health officer may have to be the county coroner, or jail physician, until a proper medical examiner system is adopted, or until other private physicians can be persuaded to assume the duties of individual medical care for the inmates of the penal institutions. But the health officer is not doing public health when he does these things. He is doing scientific practice of medicine, and I hope he will be relieved of these duties shortly because that is not the best use of his new skill and knowledges. The health department may have to continue to conduct such services as well child conferences and immunization clinics for individual patients, indigent or otherwise, until organized medicine finds a better way to maintain community immunity. The purpose of these clinics should be better protection for the health of the total body politic, not for the health of any individual in that body politic.

This profound change, as in the past, has been and will be opposed bitterly by many eminent scientists. Their argument has a familiar ring: "The community is not an entity but only an aggregate of individuals, and in curing individuals the ills of the community will be cured." Fortunately the advances in health science and social science clearly indicate the fallacy of their argument. Most people recognize that the community is an entity, not merely an aggregate of people, an entity different from every other community as every individual is different from his neighbor. It is different in its physical make-up, geographical and demographic limitation, social structure, power structure, governmental and legal structure, mental and emotional patterns, ethnic groups, mores, religious and nutritional patterns, educational procedures, institutions, and community organization. However, the community is an entity with pride and prejudice, with wealth and poverty, with needs and accomplishment, with lacks and superfluity, with ignorance and wisdom, and with weakness and power in illness and in health. This is our patient. This is

the patient for whom we must learn the art and the science of public health, upon whom we must practice the most modern and scientific diagnosis, and in whose interest we must improve our methods, measure and evaluate our techniques, and foster basic and applied research. This is the patient whose confidence, understanding, cooperation, and participation must be gained in each step and throughout the whole procedure.

This concept involves profound changes and advances that are more readily understood and grasped by medical men, because of their experience in the evolution and developments of the past 100 years and because the medical terms and analogy of diagnosis and treatment are so helpful in determining wise policy and procedure and in answering the many problems that face them in the years ahead.

RESEARCH IMPLICATIONS

If we accept this concept, let us look at the research implications. Historical research characterized the empirical era. Basic science research was the first truly investigative research and has added tremendously to our sum total of knowledge. It must continue. Clinical research in the past 50 years has changed completely the practice of medicine. Consider for a moment that the practitioner in the year 1900 had only the stethoscope and the clinical thermometer to help him with a scientific diagnosis. Almost in our lifetime clinical research has added the roentgen ray, the electrocardiograph, basal metabolism, and the myriad of laboratory tests. The next 50 years is going to see the same progress in public health research, community research, tools and techniques, indices and criteria to help us make a more scientific diagnosis upon our patient, the community. This is virgin territory with unparalleled opportunity for human welfare through research in public health science.

We can also learn from the experience in education. Medical education in the 1800's was didactic, largely lectures, relatively cheap and easy. The basic science era brought about the use of the laboratory in education and increased the cost of medical education ten-fold. It brought more equipment, more facility, more instructors—but infinitely better medical education. The clinical science era introduced another form of instruction, bedside instruction, patient-side instruction. This was considered impossible to begin with, but today medical education is going more and more into patient-side instruction, because it is so much better even if the costs have pyramided to a point where we do not even dare to determine them. If the community is our patient in public health, we too must get out of the lecture hall and laboratory and give a substantial and increased amount of our instruction at the patient's side, in other words, at the community side. Public health practitioners will have to become the clinical professors of public health. This will be difficult and costly but so is every milestone in the progress of health science education.

ACCEPTANCE OF CONCEPT

What will acceptance of this concept do? First of all, it establishes public health in the evolutionary development of health sciences. It establishes public health as a distinctive discipline with a distinctive body of knowledge and competence.

To diagnose community ills we must have knowledge of community economy, the distinctive skills of the economist, a knowledge of the social structure of the community, the cultural patterns of the different groups of the community, and the impact upon their health practices of nutritional or living patterns of recreational, religious, moral, and ethical patterns. Frequently this knowledge is necessary for varying groups within a community as is the effect of these groups upon the other groups in the community.

We must have knowledges and techniques of community organization, of the power structure of that community, of the political structure, of health laws and regulations, of attitudes that determine acceptance or rejection of change and development. We must have sophisticated knowledge of education and educational methods, of mores and morals that affect the growth and development of community consciousness and community action. These are not just words; they are the vast accumulation of knowledge of the social sciences.

We must have knowledge of community measurements, of the demographic characteristics of our patient, the age, sex, racial distribution, and the intricate ways in which these affect our patient's health; the biostatistical techniques of collection and analysis of the data that can determine mass phenomena of disease and health; the geographical base that determines isolation, transportation, and resource.

We must have the knowledge of sanitary science, technical skills that can determine oxygen demand or biologic balance under widely varying circumstances. We must know the epidemiology of the mental health of our patient, the community, and develop techniques to assess the early symptoms of community illness, physical or mental. We must have the knowledge of mass nutrition, mass disease, epidemic phenomena that provide a scientific prognosis and plan of treatment or evaluation of the past or present programs aimed at control.

All of this is nothing more or less than a scientific

approach to the diagnosis and treatment of the body politic—the history, the physical examination, the tests, the analysis, the clinical judgment, and the prescription for treatment.

Acceptance of the concept calls further for a democratic team of professional equals.

The very complexity of society, rapid advances of social science, bear directly upon the public health. It immediately becomes obvious and essential that many other professions with many other skills and knowledges must be integrated into scientific public health to obtain a diagnosis and plan of treatment for the body politic. But the democratic team concept can never be applied to community health as long as the confusion exists between individual health and community or public health; as long as we confuse patient centered medical practice with community centered public health practice.

Patient centered medical practice is, has been, and always will be dominated and controlled medically. This is the area of competence of the physician; this is the body of knowledge that is scientific medicine. Other health personnel in this area are ancillary, subordinate or paramedical personnel. The eminence of the physician is unquestioned.

It is equally obvious, as we face the extremely complex unit we call the community, the body politic, the patient of public health, that no individual, no individual centered profession, can have all the knowledges and skills necessary for the diagnosis and treatment of its health status.

The doctor has much to add to this team because his knowledge and approach to the individual is excellent background for this further training and experience upon the much more complex organism he now faces, but the doctor's supremacy is gone. A democratic team of individuals of diverse backgrounds and skills form a profession of public health that must cope with a different kind of patient. The advances of health science and social science, not medical science alone, have shown us the way to lift immeasurably the health and wealth of our patient. But we must be free to develop and practice that science upon our patient, the community.

Acceptance of this concept, then, clearly defines in a practical way what public health is and where it is going. It eliminates much of the fear and distrust of the medical profession, with all its ramifications. Fear and distrust are associated with a lack of knowledge of our objectives and goals, where we are going and whether in so going we will infringe upon the field of "their" professional eminence, the health of individuals. This definition not only says where we are going but it defines our areas of competence. It also accepts the physician's eminence and leadership in the field of individual health. It says to the physician, in essence, our job is to diagnose and treat the community, to determine its health needs, a field in which you are not qualified by your patient centered training.

We will work on individuals only for the purpose of community health, except as the community demands that we as public servants do medical care of individuals. And this we will do under protest, for it is not our function, not public health, and as soon as it can be taken over by those whose responsibility is individual health, we wish to be relieved of it. We expect the right to examine our patient as the private physician has the right to examine his. If that examination reveals community need, say a low community immunity against diphtheria, we will assist the private physician in every way we can to do immunizations of individuals and will resort to health department clinics only as a stopgap, if the community immunity levels cannot be otherwise raised to a safe level. This is nothing new; we just have not said it clearly before and have left in the minds of private physicians the idea that we were going into the immunization business and other patient centered business, which, unfortunately, too many health departments have done. By this answer we say clearly and firmly that public health is not the administration of medical care to individuals, indigent or otherwise, but we cannot avoid determining the need and adequacy of medical care programs originating and functioning through the medical society and individual private physicians or government agencies. It is the fear that public health plans to take over individual health that makes medicine rightly suspicious of the whole public health program.

CHALLENGE OFFERED

Acceptance of this concept will change the whole face of our primary problem of public health, the recruitment and training of public health personnel. As an example, let me take one type of personnel, our greatest lack and shortage, the trained and qualified health officer. It has been said wisely that nothing is as important in recruitment of any profession as a challenge. I know the excuses, good excuses, of poor employment practice, inadequate compensation, and lack of professional recognition. They all play a part, but the reason we are not recruiting the cream of young physicians is that we have offered no challenge, no stimulating and daring future. Administration, paper work, does not appeal to a man faced with opportunity of service to the sick. The challenge of diagnosis is the real drawing card, the focusing all of his attention and his talents upon the discovery of disease and diagnosis of illness and its cure. If we could go to such young men and say, "Here is a new patient, infinitely more complex

than the individual you will be working on, a science in its infancy compared with medical science, a patient needing diagnosis that demands all of your diagnostic acumen and then some; these are relatively unchartered seas with opportunities for human service and good much greater than anything you have dreamed of; here is a specialty that is dangerous because you will enter it with no 'God-given authority' and 'supremacy'; here you will earn your leadership if you have it in you; here your successes and failures are not counted in scores but in thousands and hundreds of thousands"—by this kind of challenge we could begin to skim the cream from the top. But we dare not, in good faith, make this challenge until we accept this answer that clearly places us in the limited specialty position, with responsibility for the diagnosis and treatment of the body politic. The smart young men of medicine will not be sucked in by the glittering generalities that public health is everything, or the reverse, that it is limited to administrative boredom.

It is high time public health grew up and defined clearly its objective, purpose, function, competence, and distinctive skills and body of knowledge in terms that can be understood clearly by itself, other professions, and the public. This concept of public health as the scientific diagnosis and treatment of community health needs and status, this concept of the community as the patient of public health, does just that. The growing and rapid acceptance of this concept within the public health profession augurs well for everyone concerned. However, we must remember that it took at least 50 years for complete acceptance of each of the profound changes of health science in the past. We must not expect a miraculous acceptance of this last profound change.

The emerging science of public health demands daring leadership that is not afraid to come forth from the basic professions from which it came into the new profession of public health, leadership that is challenged by the difficulties of education in a new profession, that is challenged by virgin territory of community research opening up before us, leadership that can direct, through competence in public health, the team of professional equals that is the "doctor" of the body politic. Medical men must either accept this challenge or see others take over the leadership that could have been their own.

♦ Dr. McGavran, Dean, School of Public Health, University of North Carolina, Chapel Hill, N. C.

Rural residents are admitted to hospitals more often than urban residents, according to Health Information Foundation. But city dwellers, once admitted to hospitals, generally require a longer stay.

A New Superior Oral Diuretic Drug, Chlorothiazide (Diuril)

Clinical Evaluation

GEORGE R. HERRMANN, M.D.;
M. R. HEJTMANCIK, M. D.;
R. N. GRAHAM, B.A.; and
R. C. MARBURGER, B.A.

Galveston, Texas

"DROPSY," the waterlogging of the body tissues as a result of the retention of sodium in patients with congestive heart failure and other conditions, has always posed the problem of the relief of the edema by medical therapy. In response the herbalist, pharmacologist, and synthetic chemists have offered a whole host of antiedemic drugs over the past few decades. Great strides have been made in the preparation of effective diuretics, and as a result, the edematous patient now has a much better prognosis, with the prospect of many more years of comfortable life to look forward to. Withering in 1785 had recommended the administration of the foxglove until it acted upon the motion of the heart or on the kidneys increasing urine flow, or on the stomach producing vomiting.[24] Urea shortly after its synthesis by Emil Fisher was recognized to be a natural diuretic.[14] The purines or xanthines were found by German pharmacologists to increase the urinary output. Caffeine, theobromine, and theophylline or Theocin[2, 5] were superceded by Euphyllin or aminophylline, which dominated the field for a decade.[19] These drugs had vasodilating effects upon the arteriolar bed and were considered to increase the blood flow, especially through the coronary and the renal arterioles.[3, 8, 9, 10, 12]

The organic mercurial drug, Novasurol, developed for the treatment of syphilis, was found accidentally in 1920 to produce a profuse diuresis in an edema-

Supported in part by a grant and a supply of drugs from Merck Sharp and Dohme and a grant in aid from the H. H. Weinert Fund.

tous syphilitic patient.[16] Less toxic organic mercurial drugs were demanded and supplied as Novurit or Salyrgan until a safe organic mercurial diuretic with a protecting sulfhydryl radical was finally developed.[1, 4, 6, 7, 13, 15, 17, 18, 22] These mercurial diuretics are most effective by parenteral injection, and generally oral preparations require too large a dose of mercury for continuous use over the extended number of years that many chronic edematous cases require. The mercurial diuretics were found to affect the tubular epithelial cells and to prevent sodium reabsorption. Mercury was thought to interfere with the enzyme systems in the tubular epithelial cells and cause a rejection of sodium and water into the renal tubular lumina to produce diuresis.

Dr. George R. Herrmann and his co-authors are from the Cardiovascular Service and Research Unit of the Department of Medicine, University of Texas Medical Branch. The paper was presented for the Texas Heart Association, April 20, 1958, in Houston.

The problem of edema resulting from retention of sodium in patients with congestive heart failure and other conditions has been met with varying success by a procession of agents, recently mercurials and carbonic anhydrase inhibitors. Chlorothiazide (Diuril), a sulfamyl benzothiazide compound, is reported here to be the safest, most effective, and most practical diuretic introduced since Thiomerin.

Sulfanilamide during its oral administration as an antibacterial agent was noted to produce a diuresis.[4, 6, 7, 13, 17] Delicate enzyme system studies by several investigators showed this to be the result of carbonic anhydrase inhibition in the epithelial cells of the tubule.[4, 6, 7, 13, 15, 17] Acetazolamide or Diamox was developed as a more powerful carbonic anhydrase inhibitor for the augmentation of sodium and water excretion. It has been found to have a tendency to produce concomitant potassium loss and to become less effective in continued use.[1] An augmented chemical investigation and biologic screening searchings were carried out for similar oral nonmercurial diuretic drugs with the hope of finding other effective diuretics and especially one toward which tolerance would not develop so readily.

Chlorothiazide (a sulfamyl benzothiazide compound) was synthesized and was found in screening tests to produce a free diuresis in animals with outpouring of sodium, chlorides, and some potassium into the urine. The action was presumed to be the inhibition of the carbonic anhydrase enzyme system, but the fact that it augmented acetazolamide diuresis has suggested that the chlorothiazide action is probably on another tubular cellular enzyme system. We have studied in our Cardiovascular Research Unit during the past two decades the effects of most of the diuretic agents and most recently particularly the effects of chlorothiazide (Diuril) on the electrolyte pattern of the blood and of the urine. During the past year, we have determined the urinary excretion of water, sodium, patassium, and chlorides, during and following administration of Diuril. We have made some comparisons with the effects of Thiomerin, lanatoside D, and aminophylline previously studied in edematous patients with congestive heart failure and other diseases involving edematous and hypertensive states. A control study period of 1 to several days was prescribed for our hospitalized patients, and they were placed on a low 100 mg. salt diet. During this time digitalization was accomplished in all patients. Practically all of them were given potassium chloride 1 to 2 Gm. per day or potassium Triplex 5 cc. three times a day, and in some after the first day the electrolyte excretion had become stabilized.

PRESENT STUDIES

The accumulated data on 50 hospitalized patients with congestive heart failure treated with chlorothiazide (Diuril) have been analyzed for this report. Most of these patients (23) had coronary arterial atheromatous ischemic heart disease, as shown in table 1. In 2 cases of nephrosis not included in the table, Diuril failed to cause a diuresis.

TABLE 1.—*Etiology of Heart Disease in 50 Patients with Failure and Other Cases of Edema Treated with Chlorothiazide (Diuril).*

Ischemic coronary artery atherosclerotic disease	23
Hypertensive arteriolar disease	7
Rheumatic valvular disease	6
Syphilitic aortic disease	3
Hypoalbuminemia	
Cirrhosis 2, Hepatitis 2	4
Nephrosis	2
Anemia and leukemia	2
Eclamptic and endocrine-corticoid disorders	3

In general, blood and urine chemical data and the effects of the Diuril on the electrolytes and water were noted in daily complete 24 hour urine analyses and weekly blood chemical studies. In some cases after checking a 2-hour control specimen the data were obtained from 2-hour specimens. At first, we used as little as 250 mg. of Diuril one, two, three, or four times a day, and then we gradually doubled the dose for a total of 1 to 2 Gm. per day. The average 24 hour dose in this series was 750 mg. because of the low dosage used at the beginning of the study.

We now give 1.5 to 2 Gm. per day and have had no toxic reaction other than a mild rash in 2 patients; diarrhea in 1 patient, which may have been incidental; and hypopotassemia (3.2 milliequivalents of potassium per liter of blood) in 2 patients (table 2 and fig. 1). Diuril in 1 to 2 Gm. doses orally practically always has initiated a diuresis within 1 to 2 hours to reach a maximum at 4 hours and continue for another 12 to 24 hours. In this study Diuril was found to be effective day in and day out for as long as 66 days. No tolerance seemed to develop (table 2).

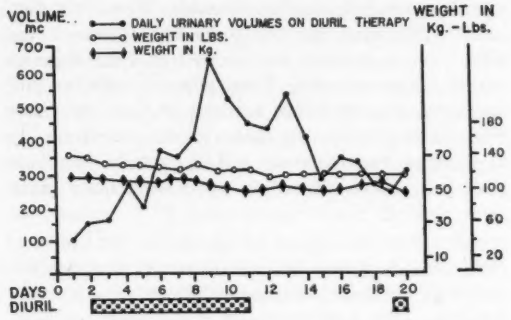


Fig. 1. Effect of Diuril on urinary output and body weight.

The average duration of Diuril therapy in our patients was 14½ days with a maximum of 66 days and a minimum of 2 days. The urinary output before therapy averaged 1,120 cc. per day (maximum 1,200 cc., minimum 200 cc.). After Diuril the average output was 1,725 cc. per day, with a maximum of 7,000 cc. per day and a minimum of 350 cc. per day. This minimum occurred in a patient in whom potassium 45 milliequivalents per day, digitoxin 1.6 mg., and Thiomerin 2.0 cc. had failed to cause diuresis. The loss of weight in these patients over the average 14½ days of therapy was 15½ pounds (7 kilograms). The maximum weight loss was 40 pounds in 11 days, and the minimum was no loss in a rare instance (table 2).

TABLE 2.—*Average Maximum and Minimum Values in 50 Patients Treated With Chlorothiazide (Diuril).*

	Average	Minimum	Maximum
Dose per day (250 mg. 1 to 8 times)	750 mg.	250 mg.	2 Gm.
Onset of action	4 hr.	2 hr.	5 hr.
Maximum action	16 hr.	12 hr.	24 hr.
Duration	14½ da.	0 da.	26 da.
Volume of urine per day (Control, 1,120 ml.)	1,725 ml.	350 ml.	7,000 ml.
Weight loss	15½ lb.	0 lb.	40 lb.

Diuril was given in 1 to 2 Gm. doses, and the output of urine, water, and electrolytes in specimens taken every 2 hours after the administration of a diuretic for 6 to 12 periods was determined (fig. 2). The output of the urinary electrolytes was quad-

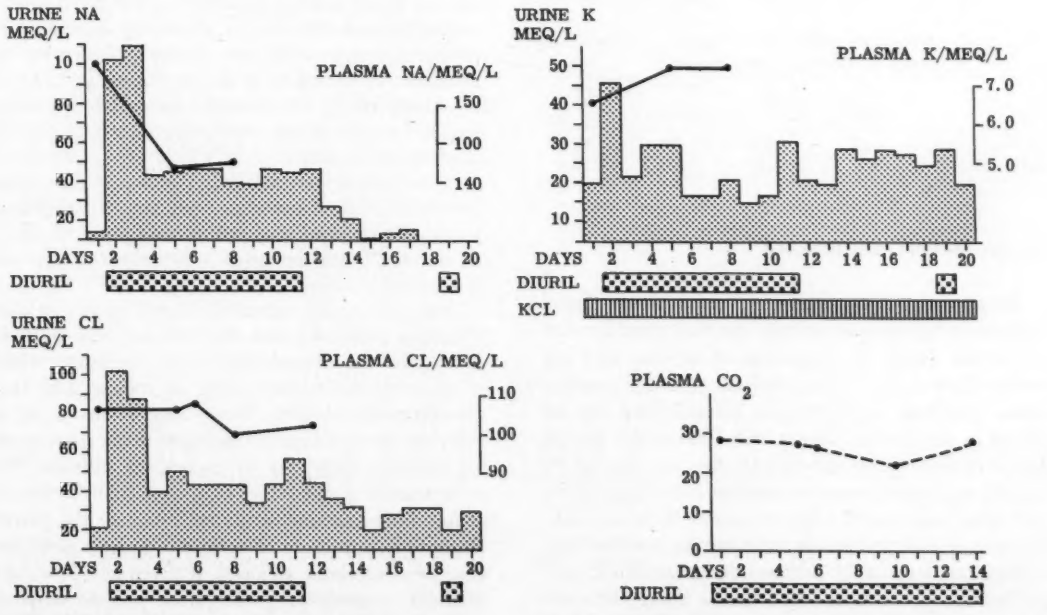


Fig. 2. Graphs showing the output of sodium, potassium, and chlorides in urine and the level of carbon dioxide in blood plasma during the administration of Diuril.

rupled frequently in the first few days of the Diuril therapy. It then was maintained at doubled values for 5 to 7 days and remained elevated as long as the urine flow was increased above the control output. The patients were on a low salt, 100 mg. per day, diet, and most of them received 45 milliequivalents of potassium per day. The total output was determined in milliequivalents per liter and calculated from these data in milligrams per 100 cc.; finally the daily output of electrolytes in grams per day were determined. These patients in congestive heart failure excreted on the average 28.75 Gm. of sodium, 35.03 Gm. of potassium, and 29.5 Gm. of chlorides for the diuretic period averaging 14 days. The potassium output was unduly high as a result of the routine loading of potassium chloride or Triplex (table 3).

The effect of the Diuril diuresis on these electrolytes in the plasma was slight (table 4). There was no change in potassium probably because of daily potassium therapy; slight drops in the sodium and chloride levels occurred.

TABLE 3.—*Average Output of Urine Electrolytes per Day Before and After Administration of Chlorothiazide (Diuril) and Total During 14 Days of Therapy.*

	Sodium (Gm.)	Potassium (Gm.)	Chloride (Gm.)
Daily output before Diuril	1.63	1.66	2.54
Daily output after Diuril	2.01	2.45	2.94
Total output in 14 days of Diuril	28.74	35.03	29.5

TABLE 4.—*Blood Electrolyte Shifts Caused by Administration of Chlorothiazide (Diuril).*

	NA (mEq./L.)	K (mEq./L.)	Cl (mEq./L.)	CO_2 (mEq./L.)
Before Diuril	144	4.84	106	24.5
After Diuril	139.5	4.88	101.2	25.8

TREATMENT OF EDEMA

When the patient with heart disease has developed congestive failure with edema, the first consideration of course should be restriction of activity and salt intake. Rest in bed in the most comfortable position often results in a spontaneous diuresis from the increase in the cardiac output that follows the rest in bed. The edematous patient on a low salt diet of 50 to 500 mg. per day and no sodium containing foods and drugs usually will begin to excrete water and salt. In spite of this, the edema may persist, and the next therapeutic step is to achieve digitalization in the patient and put him on maintenance dosage of a reliable effective digitalis preparation. The patient may go along for years with good circulatory and renal equilibrium and fluid balance. However, eventually the edema usually reaccumulates.

Lanatoside D has been shown by Werkö and his co-workers[17] to have a direct diuretic effect upon the kidneys as well as to increase the cardiac output of the failing heart. It has been demonstrated in our laboratory and by several others that there is increased output of sodium and chlorides and an especially augmented loss of potassium from rest in bed with low salt diet and digitalization. When rest, diet, and digitalization are not sufficient to remove the edema, other diuretics are resorted to. Oral diuretics are of course desirable. Urea, purine, xanthines and especially aminophylline are only moderately effective. Aminophylline has shown a particular tendency to produce vasodilatation and apparently increased glomerular filtration, which we demonstrated many years ago.[9, 10, 12]

Soon after the report of accidental discovery in 1920 of the potent diuretic effect of the organic mercurial Novasurol, a number of new organic mercurial diuretics were synthesized. Govaerts and Bartram in 1939 showed that the organic mercurials had a direct diuretic effect upon the kidneys independent of renal blood flow and filtration rate. It has been demonstrated that the mercurial depresses the tubular reabsorption of sodium and water and causes an acute profuse outpouring of sodium and chlorides and a greatly increased volume of urine.[16] The original mercurial Novasurol was too toxic and so irritating that it had to be given intravenously; occasionally it produced death. We[9, 10, 12] showed in 1933 that the use of aminophylline added to mercurial diuretic complemented the diuretic action by increasing the glomerular flow while the tubular reabsorption was decreased by the effect of the mercurial. The addition of aminophylline has made the mercurials less irritating, and combinations were prepared which could be used intramuscularly.[3, 8, 9, 10, 12, 15] The substitution of a monothiol with sulfhydryl group of the organic mercurial diuretic made an even less irritating compound, Thiomerin, that is the least toxic of all the mercurials. It can be given subcutaneously and still is adequately active.

The new organic mercurial diuretic usually initiates a diuresis within 4 hours after it is subcutaneously injected, and the diuresis reaches its maximum within 8 hours with the outpouring of sodium and large quantities of chlorides. Then there seems to be an ebb tide, and the organic mercurial must be repeated by injection every day to maintain a diuresis. This maintenance of the effect of a mercurial diuretic by daily administration usually will deplete the plasma electrolytes, especially chloride and sodium, and produce hypochloremic alkalosis. If given at 3, 5, or 7 day intervals, it produces a fluctuating profuse outpouring during the first 12 hours with a prompt return to the oliguric state until the next injection is given.

Ammonium chloride will augment the diuretic action, especially in the presence of a hypochloremic alkalosis. The mercurials are thus not the ideal therapeutic answer to the problems of edema elimination. The possibility occurs to us that this fluctuating type of diuresis alternating with oliguria might be undesirable. Organic mercurials frequently repeated may result in a hypochloremic acidosis by the excessive loss of sodium, and a hypokalemia may follow from the excessive loss of potassium.

After sulfanilamide was found to produce a diuresis, the chemists synthesized various compounds and came up with acetazolamide (Diamox),[15] which was found to be a powerful carbonic anhydrase inhibitor and functioned in that way to interfere with the absorption of sodium and water by the renal tubules. Diamox was found to be very active when first given; it produced an outpouring of carbonates and reduced the carbon dioxide of the respiratory acidosis. Unfortunately, however, most patients seemed to develop a tolerance for the drug after 2 or 3 days, and intermittent treatment had to be resorted to. Greatly increased dosage of 8 times the effective dose of 250 mg. had no more effect after an interval of 2 or 3 days than the 250 mg. dose of Diamox had had at first. In the attempts at the synthesis of other carbonic anhydrase inhibitors, chlorothiazide (Diuril) was prepared. Diuril was found to have more than the carbonic anhydrase inhibiting effect, as it was effective after acetazolamide had had its effect.

RESULTS WITH DIURIL

Diuril has been proven by our studies and others to be very effective in the treatment of edema. Diuril produces about equal sodium and chloride outputs and usually less bicarbonate or potassium than acetazolamide. Potassium losses may be significant in patients on a very low sodium diet and in patients with hypertension, nephrosis, and especially cirrhosis who are on long term therapy. Diuril acts somewhat like a mercurial in small doses, but after heavy dosage it acts more like acetazolamide in producing an alkaline urine similar to that of a carbonic anhydrase inhibitor effect but with less acidosis. No tolerance

GRAPHS OF DIURESIS-SPONTANEOUS, DIURIL AND THIOMERIN

(PATIENT: R.L.B. - # 52501-M)

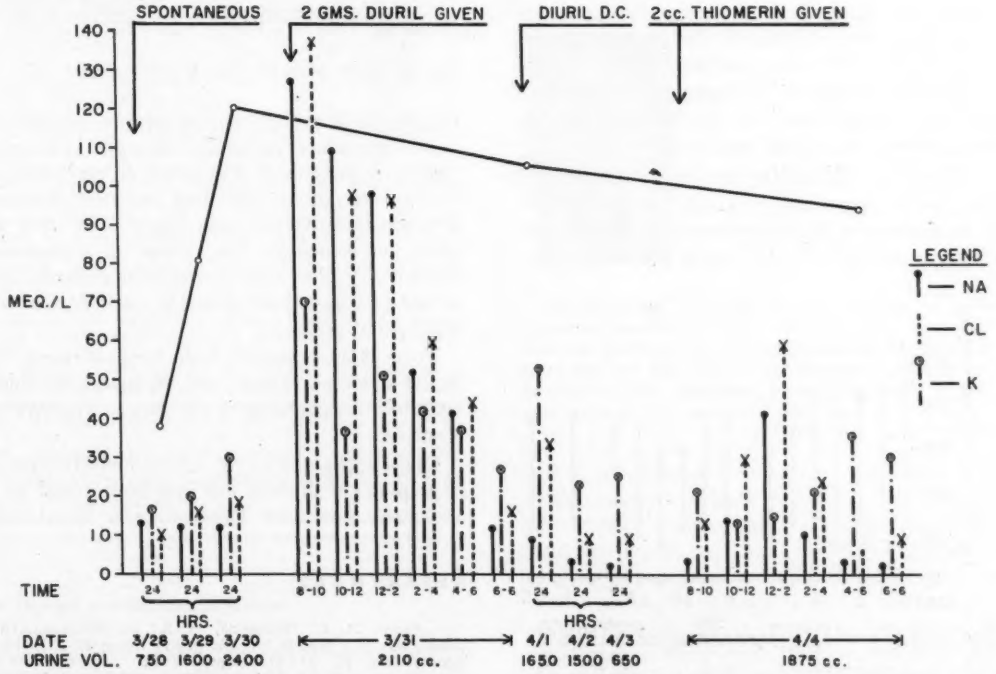


Fig. 3. Graph showing diuresis, spontaneous, after Diuril, and after Thiomerin. The solid line connecting clear circles, running from left to right above the center of the graph, shows volume of urine output. The drop in output from 2,110 cc. to 1,650 cc. to 1,500 cc. to 650 cc. on discontinuation of Diuril and the rise to 1,875 cc. after 2 cc. of Thiomerin are not charted but are recorded on the last line below the graph.

seemingly develops, and the drug was found to be effective day in and day out. Increasing the dose has a slightly greater effect, but usually the effective dose is 1 to 1.5 Gm. and occasionally 2 Gm. per day. Figure 3 shows a comparison of electrolyte excretion patterns during spontaneous diuresis and diuresis with Diuril and Thiomerin.

The usual dose is 0.5 Gm. about every 8 hours. It usually can be decreased to half and sometimes to one-fourth of that dosage. The dietary intake of sodium may be somewhat less sharply restricted and it seems desirable to add potassium chloride 4 Gm. per day especially if digitalization or steroid administration is being carried out and in cases of hypertension and in cirrhosis. Diuril is just as effective and safer by mouth than it is by vein. It has been used successfully in edema of congestive heart failure, of toxemia of pregnancy, of the premenstrual period, and of endocrine or steroid origin. It is persistently effective over a period of weeks and months in hypertensive patients, but less so in cirrhosis and nephrosis with hypoalbuminemia.

COMMENTS

Diuril has been found to be the most practical and the most effective diuretic that we have studied for the treatment of edema and the augmentation of the excretion of sodium. It begins to act within 2 hours after administration by mouth and continues to be a saluretic day in and day out for weeks.

It is ideal for long term therapy in congestive heart failure except in patients on a very low sodium diet and in patients with hypertension, nephrosis, and cirrhosis. It may produce low serum potassium levels unless supplementary potassium chloride 1 Gm. two or four times a day is administered.

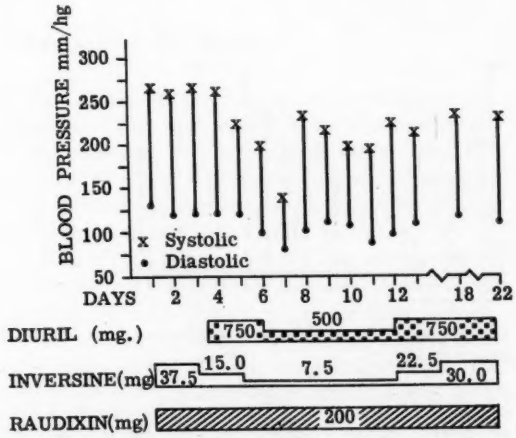


Fig. 4. Blood pressure during Diuril therapy.

Diuril has been found to be particularly effective in patients with hypertensive atheromatous coronary ischemic heart disease with edema, superior to all other diuretics including parenteral organic mercurial preparation. It is the drug of choice in eclampsia and the edema of pregnancy.

In hypertensive patients, Diuril has been found to augment the antihypertensive action of the central acting reserpine and also of the ganglionic blocking agent Pentolinium or. Ansolysen, and it permits reduction in the dosage of the antihypertensive agent. Diuril alone apparently does not produce significant lowering of blood pressure. Examples of such antihypertensive effects are shown in figures 4 and 5.

Diuril produces increased sodium and chlorides

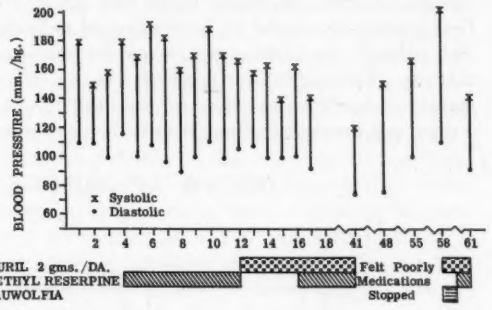


Fig. 5. Blood pressure after Diuril therapy.

output day in and day out on continuous administration.[14] It produces relatively little upset in the plasma electrolyte patterns. It is as potent on oral administration as any diuretic including parenteral mercurials. It is less effective and more likely to be toxic when given intravenously. The dosage in milligrams is 100 to 150 times that of mercurial diuretics, but it is safe and it is more effective than the mercurials when given orally.

There is an extremely wide range between therapeutic and toxic dosage, and no significant side effects and no sensitivity to the drug as yet have been observed.

Diuril appears to be the safest, most effective, and most practical diuretic that has been added to our armamentarium since Thiomerin was introduced.

REFERENCES

1. Baxter, M. R.; Hejtmancik, M. R.; and Herrmann, G. R.: Clinical Studies of Dicurin Procaine (Lilly) and of SU-1775 (Ciba), Texas J. Med. 50: 214-217 (April) 1954.

2. Christian, H. A.: Diuretics, Their Utility and Limitations, Boston Med. and Surg. J. 197:614-629 (Oct. 13) 1927.

3. Davis, J. O., and Shock, N. W.: Effect of Theophylline Ethylene Diamine on Renal Function in Control Subjects and in Patients with Congestive Heart Failure, J. Clin. Invest. 28:1459-1468 (Nov.) 1949.

4. Finnerty, F. A., Jr.; Buckholz, J. H.; and Tuckman, J.: Evaluation of Chlorothiazide (Diuril) in Toxemias of Pregnancy; Analysis of 144 Patients, J.A.M.A. 166:141-144 (Jan. 11) 1958.
5. Ford, R. V., and Moyer, J. H.: Diuretic Therapy, GP 14:118-139 (Dec.) 1956.
6. Ford, R. V.; Rochelle, J. B., III; Handley, C. A.; Moyer, J. H.; and Spurr, C. L.: Choice of Diuretic Agent Based on Pharmacological Principles, J.A.M.A. 166:129-136 (Jan. 11) 1958.
7. Freis, E. D.; Wanko, A.; Wilson, I. M.; and Parrish, A. E.: Treatment of Essential Hypertension with Chlorothiazide (Diuril); Its Use Alone and Combined with Other Antihypertensive Agents, J.A.M.A. 166:137-140 (Jan. 11) 1958.
8. Handley, C. A.; Telford, J.; and LaForge, M.: Xanthine and Mercurial Diuretics and Renal Tubular Transport of Glucose and p-Aminohippurate in Dog, Proc. Soc. Exper. Biol. & Med. 71:187-188 (June) 1949.
9. Herrmann, G.: Some Blood Chemical Findings in Congestive Heart Failure Before and After Treatment, South. M. J. 25:934-939 (Sept.) 1932.
10. Herrmann, G.; Schwab, E. H.; and Stone, C. T.: Further Studies on Mechanism of Diuresis in Patients with Congestive Heart Failure, Tr. A. Am. Physicians 48:364-374, 1933.
11. Herrmann, G. R.; Baxter, M. R.; Hejtmancik, M. R.; and Moran, A. R.: Diamox; New Oral Nonmercurial, Nontoxic Diuretic for Treatment of Congestive Heart Failure, Texas J. Med. 50:209-213 (April) 1954.
12. Herrmann, G.; Schwab, E. H.; Stone, C. T.; and Marr, W. L.: On Advantage of Alternating Vegetable and Metallic Diuretics in Treatment of Edema of Congestive Heart Failure, J. Lab. & Clin. Med. 18:902-915 (June) 1933.
13. Laragh, J. H.; Heinemann, H. O.; and Demartini, F. E.: Effect of Chlorothiazide on Electrolyte Transport in Man; Its Use in Treatment of Edema of Congestive Heart Failure, Nephrosis, and Cirrhosis, J.A.M.A. 166:145-152 (Jan. 11) 1958.
14. Papp, C., and Smith, K. S.: Urea, Forgotten Diuretic, Brit. M. J. 906-911 (Oct. 19) 1957.
15. Pitts, R. F., and Alexander, R. S.: Nature of Renal Tubular Mechanism for Acidifying Urine, Am. J. Physiol. 144:239-254 (July) 1945.
16. Pitts, R. F., and Sartorius, O. W.: Mechanism of Action and Therapeutic Use of Diuretics, Pharmacol. Rev. 2:161-226, 1950; in J. Pharmacol. & Exper. Therap. 98, April (pt. 2) 1950.
17. Pitts, R. F., and others: Chlorothiazide and Other Diuretic Agents, Ann. New York Acad. Sc. 71:321-478 (Feb. 3) 1958.
18. Saxl, A., and Heilig, R.: Diuretic Effect of "Novasurol" and Other Mercury Preparations, Wien. klin. Wchnschr. 33:943 (Oct. 21) 1920; quoted in Vogl.[22]
19. Schmitz, H. L.: Studies on Action of Diuretics; Effect of Euphyllin and Salyrgan upon Glomerular Filtration and Tubular Reabsorption, J. Clin. Invest. 11: 1075-1097 (Nov.) 1932.
20. Schwab, E. H.; Herrmann, G.; and Stone, C. T.: Complementary Action of Certain Antiedemic Drugs, Texas J. Med. 29:240-246 (Aug.) 1933.
21. Stone, C. T.; Herrmann, G.; and Schwab, E. H.: Treatment of Edema in Congestive Heart Failure, South. M. J. 27:113-122 (Feb.) 1934.
22. Vogl., A.: Diuretics and Diuresis, Baltimore, Williams and Wilkins, 1953.
23. Werkö, L.; Bucht, H.; Ek, J.; and Varnauskas, E.: Studies of Renal Circulation and Renal Function in Mitral Valvular Disease; Effect of Single Intravenous Injection of Lanatoside C, Cardiologia 29:305-320, 1958.
24. Withering, W.: Account of Fox-Glove, and Some of Its Medical Uses; With Practical Remarks on Dropsy and Other Diseases, Birmingham, G. G. J. and J. Robinson, 1785; reprinted in Medical Classics, Baltimore, Williams and Wilkins, 1937, vol. 2, page 305.

♦ Dr. Herrmann, Dr. Hejtmancik, Mr. Graham, and Mr. Marburger, Department of Medicine, University of Texas Medical Branch, Galveston.

New Doctors Are Successful Sooner

Beginning doctors do not necessarily face several years of small earnings when starting a new practice, reports the July 7 issue of *Medical Economics*. The article reports on a study that showed net incomes for doctors during their first 12 months in practice averaged $9,003. Net incomes for the second year averaged $16,229.

Geriatric and Gerontologic Problems Facing Texas

LEE D. CADY, M.D.

Houston, Texas

TEXAS HAS BEEN young demographically until recently, but the changing proportion of citizens 65 years and over shows it is aging rather rapidly. At present 7.29 per cent of the population in Texas is 65 years of age or more, whereas the percentage is 8.36 for other areas in the United States. The trend indicates the geratology phases of the Texas social and politico-economic life will be of the same dimensions as the so-called older regions of this nation in about 15 years, when the percentage in the 65 and over age group will be ±9 per cent.[4]

Dr. Lee D. Cady, manager of the Veterans Administration Hospital in Houston, delivered this paper at the Texas Geriatric Society meeting, April 21, 1958, in Houston.

The percentage of persons 65 years of age and older is increasing rapidly in Texas, creating social and politico-economic problems. Only 30 per cent of Texans as old as 65 years were not receiving old age assistance or social security benefits in 1957. State and national legislation to aid the aged at taxpayers' expense is mounting.

The improvements in general health and welfare mechanisms contributed from public and private resources have added to the Texas longevity. Resources inherent in climate, land, forests, oil, the sea, and even the omission of some of the taxes other states collect are powerful attractions for job seekers, investors, and tourists. It is easy to speculate that all these groups bring with them a somewhat greater proportion of people in the later decades of life than already exists among Texas voting citizens. People from out of the state like what they find and stay, which steepens the demographic curve toward

uniformity with the rest of the United States, and hastens Texas on to its welfare problems (fig. 1).

The increasingly frequent newspaper items each year indicate the growing awareness of different groups or organizations of problems relating to the social, psychological adjustments, housing, medical care, or costs of aging population. All of the aged except the mentally incompetent are voters, and they potentially are capable of controlling many political decisions when interested as a group.

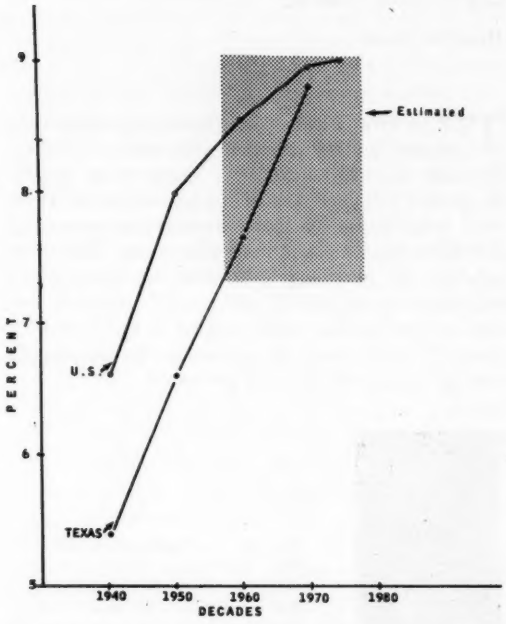


Fig. 1. Demographic curves showing the increasing percentages of persons 65 years of age and older in the population of the United States and of Texas.[5]

The older medical practitioners can remember when there was little popular concern about social security matters in Texas, for they can remember also when the horsemen of socialized medicine did not ride high on the backs of the aging. They even may not have given note less than 30 years ago to the establishment of the first unit of a hospitalization insurance group, later called the Blue Cross plan. It gets credit now for delaying a hospital crisis.

The practitioner who was graduated since 1930, however, cannot remember, if he has been at all interested, when some Capper bill, the Murray, Wagner, Capper, Dingell bill, or the current Forand bill (H.R. 9467) has not been controversial in Congress.[6] All these bills have been aiming for the improvement in the welfare of people who are or become partially or wholly supported by the taxpayer. They seek to avert some of the catastrophic costs of sickness to individuals of low incomes by application of the insurance principle—under governmental control, of course—or to have the worker contribute toward his own retirement pension before he actually comes to dependency or destitution. Most dedicated physicians have thought so little of personal retirement or see so many examples of deliberate improvidence among people that they become personally cynical and, as part of an organized profession, alarmed by the astronomical aggregate costs they hear about such planning.

WELFARE PROGRAM

In the United States during 1940, about 1 in every 15 was 65 or older, and this ratio changed to 1 in every 12 in 1957. The Texas figures for this group on the old age assistance (OAA) rolls showed a progressive increase until recently the old age and survivors insurance (OASI) program of social security began to substitute for some of them. Each January from 1943 to 1958 is shown as an old age assistance sample progression in table 1.

TABLE 1.—*Texas Old Age Assistance, January Samples.*

Year	Cases	Payments	Average	Deaths
1958	225,571	$10,635,159	$47.15	1,798
1957	225,538	10,097,233	44.77	1,956
1956	224,502	9,350,666	41.65	1,770
1955	223,334	8,658,670	38.77	1,544*
1954	222,035	8,594,931	38.71	1,566
1953	219,591	8,430,851	38.39	1,669
1952	220,869	7,263,130	32.88	1,458
1951	225,813	7,399,729	32.77	1,552
1950	221,321	7,550,435	34.12	1,473†
1949	—	—	—	—
1948	200,941	6,062,455	30.17	1,475
1947	190,354	5,047,669	26.52	1,324
1946	175,804	4,325,820	24.61	1,370
1945	170,392	3,712,235	21.79	1,169‡
1944	179,645	4,190,621	23.33	1,506
1943	183,292	3,722,428	20.31	1,284

*Full year 14,902 (6.6%).
†Full year 14,704 (6.5%).
‡Full year 10,922 (6.3%).

[Compiled from data in the Texas Department of Public Welfare Statistical Memoranda, No. 4 Files, Austin (unpublished).]

In 1950, the percentage of recipients of OAA who also received some social security money was 5.9 per cent. This dual assistance increased to 15.1 per cent by 1957. Conversely, when the OASI money received is insufficient, it may be supplemented by OAA.

Also, people who have had time enough working under social security are being kept off the OAA rolls, because their social security payments become great enough to make them ineligible. In 1957, 35

per cent of Texans 65 and older were on social security and 35.4 per cent on OAA. Less than 30 per cent of those 65 or older were still without benefit of either form of support. Texas is the seventh highest of the states in percentage of citizens 65 and older on public assistance. A subgroup of this 30 per cent not on either list are the 10,000 service-connected World War I veterans who average $164 monthly in compensation, and the 33,164 veterans with nonservice connected pensions.[5] Their $66.10 to $78.75 monthly pensions, or $135.45 when helpless, disqualifies them from OAA. Thus, 65 to 70 per cent of the group of 65 and over are probably medical indigents in the doctor's practice for more than minor illnesses, and they have little or no means to pay a hospital bill. The average of the 240,327 social security recipients got $49.58 in January, 1957, while the OAA recipients got $44.77.

The Constitution of Texas still makes it impossible to pay more than $20 per month to an OAA recipient, and the remainder comes from federal funds. However, last session the Legislature set up a committee on aging (S.C.R. 60) and a bill (H.J.R. 36) has been prepared to amend the Constitution so that vendor payments for medical care of the needy and for other improvements can be made.

Nevertheless, these low figures in Texas and elsewhere seem to explain the urgency of the proponents of the Forand bill in the Congress. It would provide hospitalization and nursing home care for the aged who are under social security. Other clinic and insurance plans are suggested to handle special groups. Also, some congressmen would extend the Hill-Burton hospital construction act to further plans for states to develop custodial facilities for the aged.[6]

If any increased hospitalization and custodial plan should be installed for the OAA of Texas, there would need to be enough hospital or nursing home beds to handle those who get sick but do not die, for the terminal illnesses of the 15,000 old men and women who die each year, the transportation to and from the hospital, and burial costs. If the Forand bill goes into effect, it certainly will increase hospitalization occupancy by the infirm aged from the social security rolls, too. In Texas the two groups are about equal and now total around 475,000. The 43,000 World War I veterans have the Veterans Administration hospitals, which would be that much relief to the state institutions. Good medical care, including good hospitalization, and good nursing home care of the aged sick cannot be made cheaper except by neglecting something important. If the aged are to have the "first class facilities where patients with chronic ailments could be cared for without the incurring of the high rates that complete hospitals must charge"[2] as visualizes by then Secretary Folsom, Department of Health, Education, and Welfare, higher per diem costs than most people imagine must be met by the taxpayers.

One other item of interest to doctors and hospitals in connection with the vendor payment proposal is a plan to form a medical care and hospitalization fund by diverting a portion of each recipient's matched allotments to an insurance pool for the care of those who need it. A bill for this purpose has been prepared for the next session of the state Legislature.

SUMMARY

There are reliable indications that the percentage of people 65 years of age and older in Texas will reach parity with the national estimate of about 9 per cent in about 15 years. Texas now stands seventh from highest in percentage of recipients of old age assistance payments. During 1957, the increasing effect of social security and veterans nonservice connected pensions definitely slowed the rate of increase of recipients of OAA, and this trend can continue for some time. The Texas Legislature is aware of this situation and is preparing somewhat to meet expected increases in medical and hospitalization costs for this population segment's indigents, actual and medical. Should the social legislation now in Congress (Forand bill and others) become laws to augment what Texas modestly anticipates doing, there will be some proportionately marked demands for increases in expenditures of tax funds for hospitalization and "vendor fees" for medical care of the aged.

REFERENCES

1. Annual Report of Administrator of Veterans Affairs, Washington, D. C., U. S. Government Printing Office, 1957, table 103, p. 313.
2. 1957 Annual Report, Texas State Department of Public Welfare, Austin.
3. Current Population Reports, Bureau of Census, Series P-25, No. 123, Oct. 20, 1955; No. 151, Feb. 11, 1957; No. 160, Aug. 9, 1957; No. 170, Dec. 18, 1957; and "Texas," Population Vol. 11, 1950, pp. 43-63 to 66, 343-353, 434-440, Bureau of Census, Department of Commerce, Washington, D. C.
4. Handbook of Old Age and Survivors Insurance Statistics, 1953-54, Department of Health, Education and Welfare, Bureau of Old Age and Survivors Insurance, Baltimore 2, Tables A-500, A-501.
5. Texas Department of Public Welfare Statistical Memoranda, No. 4 Files, Austin (unpublished).
6. Washington News, J.A.M.A., 166:25 (March 29) 1958.

Dr. Cady, Veterans Administration Hospital, Houston.

Health Insurance Survey

Two out of every five American families who are protected against the cost of illness or accident have used their health insurance in the past year to defray medical expenses, the Health Insurance Institute reports. A nationwide consumer survey of health insurance shows that 7 out of 10 families who have such insurance have used it at some time during the period their policies were in force.

Triamcinolone Diacetate (Aristocort) In the Treatment Of Varied Dermatoses

J. FRED MULLINS, M.D., and CHARLES J. WILSON, M.D.

Galveston, Texas

FOR THE PAST several years, there has been a continued search for newer and more effective anti-inflammatory drugs. One of the most recent derivatives is that of triamcinolone diacetate (Aristocort*), which is produced by an alteration in the chemical structure of the basic nucleus of 9 alpha fluorohydrocortisone. Its effectiveness has been demonstrated in the treatment of rheumatoid arthritis, bronchial asthma, nephrotic syndrome, and other miscellaneous diseases which previously have been influenced by the steroid compounds. At the time of this writing, there were only two papers which dealt with the use of this drug in the treatment of skin diseases.[1, 2]

The purpose of this paper is to present 70 cases of various dermatoses which have been treated with this new compound. Where possible, an attempt has been made to compare, weight for weight, triamcinolone with prednisone. In addition to the previously mentioned problems, an effort was made to detect side effects and compare the incidence of these reactions with other steroids.

METHODS AND MATERIALS

Although we tried to pick a variety of dermatoses to evaluate in this study, the majority of patients fell into the treatment resistant category. As in a routine clinical investigative study, a random sampling of patients was attempted. Some cases were selected because they had responded previously to other steroids, whereas other cases were benign dermatoses but with symptoms of an intractable nature. The age range was from 3 to 87 years, and the duration of therapy ranged from 1 week to 5 months. The dosage ranged from 4 mg. to 32 mg. per day.

These patients were observed constantly for steroid induced side effects, such as hypertension, weight gain, intercurrent infection, psychoses, hypokalemia, hirsutism, moon facies, osteoporosis, glycosuria, phlebitis, gastric distress, and other unwanted physiologic reactions. Thirty per cent of these patients were hospitalized and had all routine laboratory studies including circulating eosinophil count, fasting blood sugar, potassium, and sodium studies.

RESULTS

As can be seen from table 1, there were 14 cases of psoriasis vulgaris treated with this preparation, and the results were good in 8, fair in 5, and 1 poor. These were graded on the basis of a diminution in pruritus and objective improvement in the lesions. Although we have listed the number of 8 as giving a good result in psoriasis vulgaris, there were no cases of complete resolution of the lesions.

There were 3 cases of pityriasis rosea which demonstrated pruritus severe enough to warrant a short course of this drug. From the table it can be seen that these patients became completely asymptomatic, and there was no exacerbation when the drug was discontinued. The dosage in these cases was initially 16 mg. per day, and was decreased as the patient responded.

In the 3 cases of pemphigus vulgaris, 1 patient died within 6 days. Thirty-two mg. per day of triamcinolone was not sufficient to prevent the occurrence of new bullae. After initial control was attained, 1 patient has been maintained adequately on a dosage of 8 mg. per day for a period of 3 months. The third patient, who was receiving 16 mg. of triamcinolone in conjunction with intravenous ACTH, developed multiple furunculosis, steroid induced diabetes con-

Dr. J. Fred Mullins, director of the Department of Dermatology, University of Texas Medical Branch, where his co-author also is a member of the staff, presented this paper for the Texas Dermatological Society, April 21, 1958, in Houston.

Results from the use of triamcinolone diacetate (Aristocort) in 70 cases of varied dermatoses were good in 53, fair in 13, and poor in 4 cases. Side effects were minimal. The drug appears to have a 2.5 to 4 ratio weight for weight as compared with prednisone.

**The Aristocort was supplied by the Lederle Laboratories Division of American Cyanamid Company.*

trolled by diet, and a psychosis which was controlled by chlorpromazine. It should be mentioned that this patient previously had developed a similar psychotic episode on prednisone therapy.

In the 9 cases of atopic dermatitis and neurodermatitis, there were good results in all, and the dosage usually could be decreased to 8 to 12 mg. per day for maintenance.

Cases of severe contact dermatitis and dermatitis venenata responded exceedingly well to this therapy, and the cases of dermatitis venenata did not show exacerbations when the drug was discontinued. Several investigators have thought that earlier steroids prolonged cases of contact dermatitis due to poison ivy. The cases of chronic eczematous dermatitis, autosensitization reaction, and erythema multiforme drug reaction responded very well and showed no relapse on discontinuance of the preparation. One erythema multiforme bullosa reaction due to systemic carcinoma was readily controlled on 8 to 12 mg. per day. The 1 case of Fox-Fordyce disease showed a fair result in controlling pruritus on a maintenance dose of 8 mg. per day. The single case of idiopathic burning tongue was not influenced by 16 mg. per day. One patient with severe exfoliative dermatitis has been well maintained on 12 mg. per day as compared with previous maintenance on 20 mg. of prednisone.

In this study there were 24 patients who previously had received prednisone as maintenance therapy for their disease; we found that in all instances they were maintained as well on triamcinolone. Although our series was not too large, and with the realization of a fluctuation in the individual patient from time to time, it is our weight for weight estimate that the comparison ratio of triamcinolone to prednisone is approximately 2.5 to 4.

In a series of this number we believed that untoward effects in only 3 patients was an important clinical finding.

COMMENTS AND DISCUSSION

Of the 3 patients who demonstrated side reactions to the drug, 1 patient demonstrated gastric distress which was controlled by Amphogel, another showed a mild moon facies, and a third patient demonstrated a psychotic episode which was also manifested previously on prednisone therapy. This third patient likewise demonstrated steroid induced diabetes which was controlled by dietary procedures. An attempt was made to withhold supplemental potassium in this series. Two patients thought that there had been increased hair growth on the face, but this was difficult to affirm clinically. No evidence of sodium retention was detected; in fact, 2 patients lost weight while under treatment. The lack of vascular crises, such as phlebitis and bleeding tendency, is worthy of additional comment, as this was one of the feared complications of therapy with earlier steroid drugs. We have found previously in most cases of pemphigus vulgaris that it is necessary not only to utilize hydrocortisone-cortisone or their derivatives, but that ACTH should be given concomitantly. This was not done in the case of the patient who died.

In this study we treated some of the benign dermatoses with triamcinolone even though it is our opinion that steroids should not be utilized in cases where symptoms can be controlled by time honored remedies. However, in certain cases, symptomatology

TABLE 1.—*Summary of 70 Cases of Varied Dermatoses Treated with Triamcinolone Diacetate.*

Diagnosis	No. of Cases	Dosage (mg./da.)	Average Duration of Rx. (wk.)	Results		
				Good	Fair	Poor
Psoriasis vulgaris	14	48-12	4-12	8	5	1
Dermatitis venenata	12	32-8	1-14	11	1	
Atopic & neurodermatitis	9	16-8	6-20	7	1	1
Chronic eczematous & nummular eczema	5	32-4	1-20	4	1	
Autosensitization	4	16-4	2-12	3	1	
Pemphigus vulgaris	3	32-12	1-16	2		1
Exfoliative dermatitis	3	32-16	2-16	3		
Pityriasis rosea	3	16-14	1-2	3		
Subacute lupus erythematosus	1	32	6	1		
Acute lupus erythematosus	2	32-8	3-10	1	1	
Erythema multiforme	3	32-16	2-7	3		
Chronic urticaria	2	32-16	2-7	1	1	
Drug reaction	2	16	1-2	2		
Lichen planus	2	16	3-8	2		
Herxheimer reaction	1	16	1	1		
Fox-Fordyce disease	1	16	9		1	
Pruritus hiemalis	1	16	2	1		
Burning tongue	1	16	1			1
Parapsoriasis	1	16	14		1	
Totals	70			53	13	4

may be so severe as to warrant and welcome a short course of therapy. We believe that it is also of significance that none of the results of laboratory studies, such as electrolyte balance, were altered by this preparation. The previously reported diuretic effect of this drug was obtained in only a few of our cases.

SUMMARY AND CONCLUSIONS

Of 70 cases of varied dermatoses treated with triamcinolone diacetate the results were good in 53, fair in 13, and poor in 4 cases.

This is an extremely effective anti-inflammatory agent and, in our comparative studies, carries fewer untoward side effects than other steroids. As compared to prednisone, triamcinolone diacetate seems to have a 2.5 to 4 ratio weight for weight.

Although the results were uniformly good and the side effects minimal, this drug should be utilized with clinical caution.

REFERENCES

1. Rein, C. R.; Fleischmajer, R.; and Rosenthal, A. L.: Use of New Corticosteroid (Aristocort Diacetate) in Dermatology, J.A.M.A. 165:1821-1823 (Dec. 7) 1957.
2. Sherwood, H., and Cooke, R. A.: Preliminary Evaluation of New Corticosteroid in Allergic Diseases, J. Allergy 28:97-101 (March) 1957.

♦ Drs. Mullins and Wilson, Department of Dermatology, University of Texas Medical Branch, Galveston.

Blood Transfusion Machine

An electronic machine that enables doctors to know when a patient needs a blood transfusion during surgery has been devised by Dr. Harry H. LeVeen, chief of surgery at the Veterans Administration Hospital in Brooklyn.

The machine, called a blood-loss monitor, is in use at the Brooklyn hospital for all heart surgery and for most operations for cancer, burns, and other conditions in which heavy blood loss is likely to occur. The new instrument automatically and continuously measures the amount of blood lost by a patient during an operation.

Films of Exhibits To Be Available

Outstanding scientific exhibits at major annual medical conventions are being preserved on a film strip by the Lakeside Laboratories, Inc., Milwaukee. A staff of medical journalists and photographers have started to attend major medical meetings to film close-ups of illustrative visual and audio material.

Medical colleges, teaching hospitals, and county medical societies are being offered the opportunity to start building their own library of these film strips. Requests should be directed to Helen Martin, Executive Secretary, "Exhibits-On-Film," Lakeside Laboratories, Inc., 1707 E. North, Milwaukee 1.

Atypical Epithelial Lesions Of the Cervix

A Consideration of Their Possible Precancerous Nature

C. T. ASHWORTH, M.D., and R. C. REYNOLDS, M.D.

Dallas, Texas

IF IT WERE possible to recognize and to define morphologically a precancerous state in cervical epithelium, it obviously would constitute a valuable adjunct in the control of cervical cancer. From comparison with the genesis of cervical carcinoma in experimental animals, as described by Von Haam and Scarpelli,[13] and by reasoning from known facts regarding the origin of some human cancers, it seems likely that precancerous morphological and biological changes do occur as a preliminary step in the development of carcinoma of the cervix.

Dr. C. T. Ashworth and his coauthor, a Texas Division, American Cancer Society fellow, are from the Department of Pathology, University of Texas Southwestern Medical School and Parkland Memorial Hospital. The paper was given for the Section on Pathology at the Texas Medical Association annual session in Houston, April 21, 1958.

A series of 1,860 cervical biopsies served as the basis for this histologic study. The incidence, morphological characteristics, and subsequent course of various epithelial lesions, some unrelated to genesis of carcinoma of the cervix and some considered precancerous, are discussed.

Although some atypical epithelial changes in the cervix may be precursors of cancer, it is apparent that others will be wholly unrelated to cancer. It is in the differentiation of these two forms of atypicality that we are especially interested at this time. From the beginning, however, it must be acknowledged that many aspects of this problem require further delineation and many of the questions cannot be answered at this time.

SOURCE OF MATERIAL

The cervical biopsy material from March, 1957, to April, 1958, at Parkland Memorial Hospital, and accompanying cytology smears when present, were reviewed for the purpose of determining the incidence and characteristics of all atypical epithelial reactions. Particular emphasis was given to those cases with atypical changes thought to be unrelated to malignancy, and to those thought to be of possible precancerous nature. For comparative purposes all cases of invasive and of noninvasive cervical cancer encountered in this period also were reviewed.

Cervical biopsies on 1,860 patients were available. These were four-quadrant punch biopsies in practically all cases, with accompanying cervical smears in many. This material is obtained routinely on all clinic patients, in all obstetric cases with cervical erosion or other gross abnormality of the cervix, and on all patients admitted to the hospital for dilatation and curettement in the treatment of incomplete abortions. In the latter group, cervical smears were not obtained, however. The cervices of surgically removed uteri were not included in this survey. However, in practically all of these there had been previous biopsy of the cervix. With this point in mind it is interesting that during the period of study, no cases of carcinoma were picked up on the study of hysterectomy specimens that had not already been diagnosed or suspected.

TYPES AND INCIDENCE OF LESIONS

Of the 1,860 cervical biopsies, 36 (1.9 per cent) cases of carcinoma of the cervix were found. There were 38 (2 per cent) cases of noninvasive carcinoma, and 80 (4.3 per cent) cases of epithelial dysplasia thought to be of a potentially precancerous nature (table 1). Cases encountered in the review which were subjected to biopsy because of studies antedating the starting time of the survey were not included in these figures in order better to indicate the prevalence of these lesions. In at least 25 per cent of cases the biopsies revealed some of a variety of atypical proliferative reactions not thought to be of precancerous nature.

TABLE 1.—*Incidence of Cervical Lesions During 13 Month Period.*

	Number	%
All cervical biopsies March, 1957, to April, 1958	1,860	100
New cases of invasive carcinoma	36	1.9
New cases of noninvasive carcinoma	38	2.0
New cases of epithelial dysplasia	80	4.3

Since biopsies in cases of invasive cervical carcinoma are usually obtained because symptoms lead the patient to the physician, the incidence of 1.9 per cent naturally cannot be considered indicative of the prevalence rate of invasive cancer of the cervix. On the other hand, the vast majority of cases of noninvasive carcinoma, and of precancerous changes, are discovered as the result of random sampling, the only selection being due to the presentation of the patient to the hospital or clinic for causes that seem to be unrelated. Thus these figures may be considered to approximate the prevalence rate of these lesions. Morbidity-prevalence rate, of course, is to be differentiated from morbidity-incidence rate. The latter refers to the number of new cases developing in a population previously shown to be free from the disease or lesion. We have no data applying to the morbidity-incidence rate, either of carcinoma in situ or of precancerous lesions.

The disparity between prevalence rate of precancerous lesions, carcinoma in situ, and invasive carcinoma is explained at least partly by the prolonged duration of noninvasive carcinoma and of precancerous lesions, as contrasted with invasive carcinoma. Undoubtedly, regression of some precancerous lesions also will account for some of the higher prevalence rate of such lesions than of carcinoma.

The varieties of atypical epithelial lesions of the cervix recognized in this survey, and a suggested classification into categories of inflammatory or regenerative, precancerous, and cancerous are shown in table 2.

MORPHOLOGICAL CHARACTERISTICS AND SUBSEQUENT COURSE

Regenerative Hyperplasia.—Following ulceration of the squamous epithelium, or denudation from cervical biopsy, one commonly finds segments of al-

TABLE 2.—*Classification of Atypical Cervical Lesions.*

Inflammatory and Regenerative	Precancerous	Cancerous
Reserve cell proliferation	Leukoplakia	Carcinoma in situ
Squamous metaplasia	Papilloma	Invasive carcinoma in situ
Regenerative hyperplasia	Epithelial dysplasia Spinous cell type Spindle cell type	
Condyloma and condylomatoid hyperplasia		
Epithelialitis with and without cellular atypism		

tered cells representing regenerating epithelium. Such epithelium is usually thinner than normal, and the cells have decreased cytoplasm. The nuclei are uniform but slightly enlarged and have homogeneous chromatin material. There is lack of glycogen in the cells. Frequently, there will be noted a sharp line of demarcation from adjacent normal, glycogenated cells.

There is little problem in histologic identification of this type of lesion. No relationship to malignant cell changes seems to exist, and it appears that reversion to normal squamous epithelium occurs readily as glycogen is formed in the superficial cells.

Reserve Cell Hyperplasia.—Frequently associated with cervicitis and erosion, areas in the cervical canal and in the endocervical glands are found where the deep, reserve cell layer undergoes proliferation beneath an intact columnar epithelium (fig. 1). This

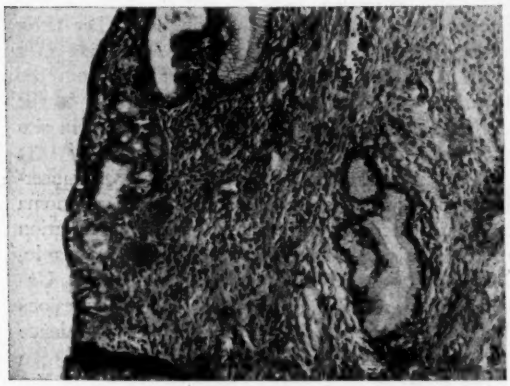


Fig. 1. Photomicrograph of reserve cell hyperplasia in the cervical canal. Hermatoxylin and eosin stain. Reduced from x 120.

produces a stratified effect. It is probably a forerunner of squamous metaplasia and often may be found associated with it. The proliferating cells are small, with little cytoplasm, and their nuclei are oval, with smooth, pale chromatin structure. In cytologic preparations groups of these hyperplastic cells, because of scanty cytoplasm, superficially may resemble malignant squamous cells. Uniformity of nuclear size and structure and the small nucleoli are useful characteristics for differentiation.

There is no indication that proliferation of the reserve cell layer may progress into anaplasia. Its natural course appears to be that of regression, or conversion into squamous metaplasia.

Squamous Metaplasia.—Squamous metaplasia, also referred to as epidermidization, is well known and very common. It is associated especially with the process of chronic cervicitis and erosion, and is characterized by the formation of stratified squamous epithelium in areas which previously were lined by columnar epithelium. Thus, it is found especially in the endocervical glands and in the cervical canal. The constituent cells are atypical, but not anaplastic in appearance (fig. 2). The nuclei are uniform and have a pale, homogeneous chromatin structure. The cytoplasm is less abundant than in normal cervical squamous epithelium, and it is devoid of glycogen. In

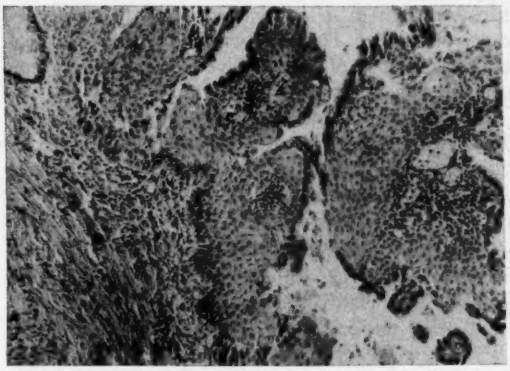


Fig. 2. Squamos metaplasia of the cervix. Reduced from x 120.

some cases a mild pleomorphism of nuclei may be seen which must be differentiated from the more marked pleomorphism of anaplastic cervical lesions.

The subsequent course of squamous metaplasia is generally considered to be reversion to normal epithelium. This occurs as the result of maturation and cornification of the surface cell layers and accumulation of glycogen in the cells. Morphologically normal squamous epithelium in the endocervical glands or cervical canal is the result. It has been held that squamous metaplasia may assume atypical properties indicating a transition into carcinoma in situ.[5]

Epithelialitis.—Extension of the inflammatory process of cervicitis into the stratified squamous epithelium is a very common finding. It is often associated with atypical changes in the squamous cells which require careful consideration.[2] The designation "epithelialitis" with or without cellular atypism is useful to indicate this specific histocytologic entity. It may be found not only in trichomonas infection but also with other forms of inflammation of bacterial and of probable viral etiology.

The findings indicating epithelialitis include intercellular edema within the squamous epithelial layer, presence of polymorphonuclears between the epithelial cells, loss of glycogen to a variable degree, and nuclear changes of an atypical variety to be described (fig. 3). Epithelialitis may involve areas of normal squamous epithelium, squamous metaplasia,

or dysplastic or anaplastic epithelium. Thus, its presence does not necessarily exclude a serious and potentially malignant lesion. Its greatest importance lies in the fact that it may elicit cellular changes which may resemble and be confused with carcinoma in situ, or precancerous dysplasia, both in histologic sections and in cytology smears.

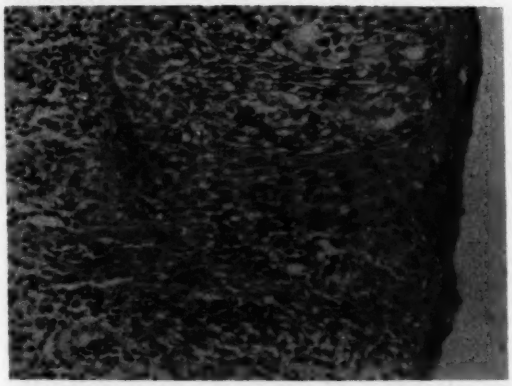


Fig. 3. Epithelialitis involving the squamos epithelium of the cervix. Loss of glycogen, intercellular edema, polymorphonuclear infiltration between the epithelial cells, and ill-defined basement membrane are characteristic of the lesion. Reduced from x 360.

The nuclear changes are those of hypertrophy, hyperchromatism, and pleomorphism (fig. 4). Distinguishing the cellular changes from those seen in dysplastic and anaplastic lesions are, in epithelialitis, scarcity of mitoses, more abundant although still scanty cytoplasm, less marked nuclear hyperchromatism, sometimes a vesicular nuclear structure, the greater nuclear pleomorphism in the basal cell zone, the incompleteness with which the squamous epithelium is involved by atypical changes, and the usual differentiation into mature and flattened cells on the surface. The problem is sometimes difficult or borderline, however, in making the differentiation from precancerous dysplasia.

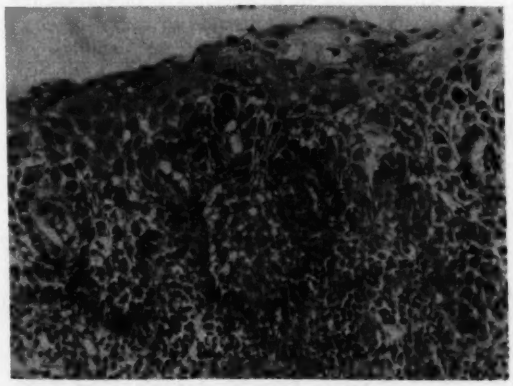


Fig. 4. Epithelialitis with moderate atypism consisting of nuclear hypertrophy and hyperchromatism in the basal and deep spinous cell layers. Reduced from x 360.

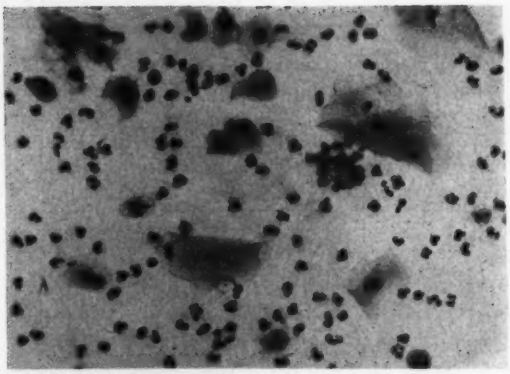


Fig. 5. Cervical cytology in case of cervicitis with epithelialitis and moderate cellular atypism. The leukocytic clusters and large basal and parabasal cells are characteristic. Reduced from x 360.

In the cytologic preparations (fig. 5), the large cells occur in sheets or as individual cells, instead of tight clumps as they do in dysplastic and anaplastic cervical lesions. The more abundant cytoplasm, less dense nuclear material, and the lobulated or bizarre-shaped nuclei found in epithelialitis are different from malignant cells. Leukocytic clusters, some of which are clumped around degenerating epithelial cells, are also characteristic.[6]

These atypical changes of epithelialitis apparently slowly return to normal. Because of the usual persistence of inflammatory disease, the changes may remain for a long time. It appears that there is no progression, when studies are done by repeated biopsies.[2]

Condylomatous Lesions of Cervix.—In young Negro women condylomas are relatively common in the material available to us for study. They present an interesting and important problem because of the atypical cellular changes that may be produced. These lesions may be found in pregnant and in nonpregnant patients.

Classical, protuberant, papillomatous condylomas (fig. 6) usually are not problematical because their nature is quickly suspected from the gross and clinical appearance. However, we believe it is important to recognize another and less obtrusive form of the disease. This is the pretumorous stage of development in which the lesion is not recognized as condyloma clinically or grossly (fig. 7). The atypical epithelial changes are similar in the two stages, and the only significant difference is the degree of papillomatous growth. This lesser form of the process we refer to as condylomatoid hyperplasia.

In all stages of condylomatous lesions, epithelialitis is noted. The same inflammatory changes within the squamous epithelium, and atypical nuclear changes of a similar type will be found. In the flatter, less protuberant lesions, the only distinguishing point in comparison with epithelialitis is the thickening of

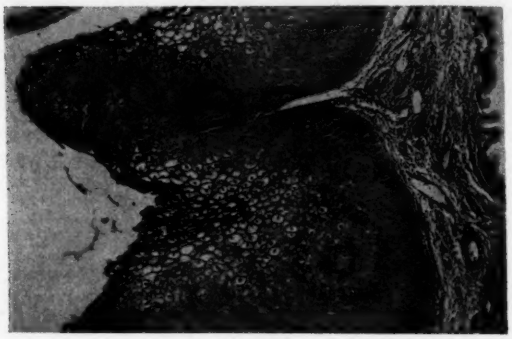


Fig. 6. Condyloma accuminatum of cervix. Increased prominence of the basal and parabasal cell zone with vacuolization of the outer spinous cells and epithelialitis can be seen. Reduced from x 120.

the squamous epithelium and the rugose, early papilliform structure noted in the involved squamous epithelium. It seems possible that condyloma accuminatum may be preceded by epithelialitis.

As the inflammatory stimulus subsides, the signs of epithelialitis disappear, and the thickened and papillary reaction in the epithelium recedes. Some cases are found in which the lesions have the appearance of a noninflammatory papillomatous growth.

Leukoplakia.—The more diffuse form of keratinization of the cervical epithelium seen in prolapsed

Fig. 7. Condylomatoid hyperplasia of cervical epithelium. This is similar to condyloma except for the absence of a definite papillary configuration. Reduced from x 120.

uteri by definition is excluded from leukoplakias. The term leukoplakia is reserved for those localized or patchy lesions of the cervical portio in which there is the production of keratin on the surface. In such lesions several variations in the nature of the involved squamous epithelium are found. In many cases the epithelium is essentially normal except for the surface keratinization. In some, there are nuclear and other cellular changes which are identical with those of epithelial dysplasia, while in a few the epithelium appears to have been transformed fully into carcinoma in situ (fig. 8).

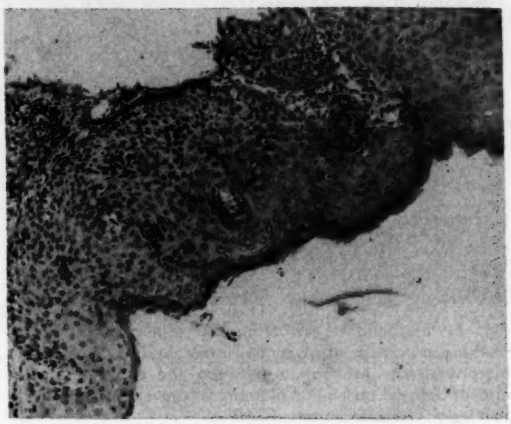


Fig. 8. Photomicrograph of an area of epithelial dysplasia of cervix with leukoplakia and parakeratosis. Reduced from x 120.

From a practical point we believe, therefore, that leukoplakia should be classified as: those containing normal squamous epithelium, those showing epithelial dysplasia, and those with carcinoma in situ. The treatment and management applied should be determined on the basis of the presence and type of epithelial cellular change present. In this respect, the presence or absence of leukoplakia is of clinical importance only in calling attention to the presence of an abnormal patch of epithelium, the histologic nature of which needs to be determined.

Papilloma of Cervix.—Fully developed condyloma accuminatum is certainly the most common form of cervical "papilloma." Papillomas in the cervix during pregnancy have been described by Goforth.[4] Whether these are actually different from condyloma accumination is debatable.

A rarer form of papilloma of the cervix which seems to be of a more truly neoplastic nature may be seen. This may be associated with nuclear and other cellular atypical changes coinciding with epithelial dysplasia or carcinoma in situ. It is our impression that this lesion develops its papillary structure as the result of and following the development of epithelial atypism and the associated more rapid

cellular growth. Probably as a result of epithelial proliferation and absence of invasion, a buckling and folding of the surface epithelium occurs, leading to a protuberant and papillary structure (fig. 9). It is likely through this route that the papillary forms of squamous cell carcinoma of the cervix develop. Such

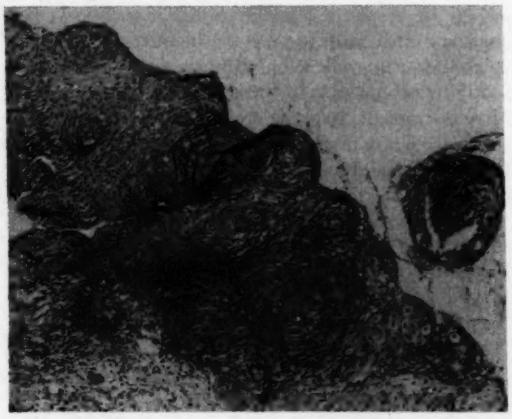


Fig. 9. Area of marked epithelial dysplasia of cervix with a papillary configuration. Reduced from x 120.

papillary lesions may form broad based growths but seldom develop into the extensive protuberances of condylomas.

Epithelial Dysplasia.—Shortly after the time when squamous carcinoma in situ began to be recognized as a common cervical lesion, it became apparent that there were certain lesions in which the atypical epithelial changes were not fully developed. The importance of this group of atypical changes became further evident when there occurred apparent regression of certain lesions of the cervix which had been classified as carcinoma in situ, and this regression especially was noted in connection with pregnancy. Names which have been applied to this group of atypical lesions, which fall short of carcinoma in situ, include basal cell hyperplasia,[8] dyskaryosis,[9] precancer,[1] precancerous metaplasia,[3] and many others. We have followed Reagan and others[12] in adopting the term epithelial dysplasia for the entire group of atypical cervical epithelial lesions which by virtue of their morphologic properties are suspected of being premalignant and which fall short, morphologically, of carcinoma in situ.

This lesion is found commonly in cervical biopsies. We are in the process of following some of these cases, but are not now prepared to add any data on the subsequent course since most of our cases, over a period of 1 year or less, either have disappeared or have remained essentially unchanged.

Two morphological types of dysplasia may be identified. The two forms are not uncommonly present together. One variety may be referred to as the spinous cell type (fig. 10 and 11). This lesion has been well described by Koss and Durfee[7] under the heading "koilocytotic atypia." It is characterized by the development of large nuclei which are hyperchromatic, sometimes binucleated, and pleomorphic. In this type the cytoplasm differentiates relatively well, becoming abundant and often storing glycogen, but in less than normal amounts. Frequently a vacuolated or ring shaped appearance is presented by the cells in the outer portion of the epithelium. The other variety of dysplasia may be termed spindle cell or basal cell hyperplasia type (fig. 12 and 13). It is mainly a proliferation and piling up of long, basal type cells which extend well out into the squamous

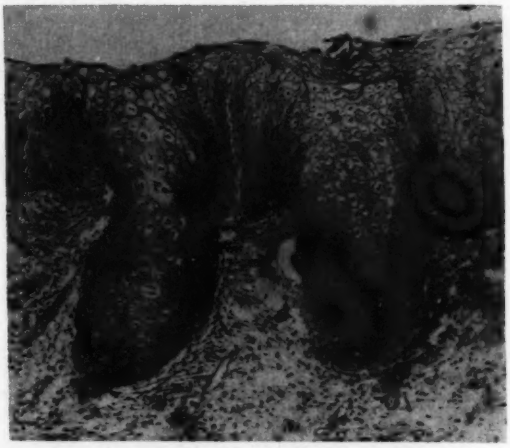


Fig. 10. Area of epithelial dysplasia of cervix with predominant involvement of spinous cell layer. Reduced from x 120.

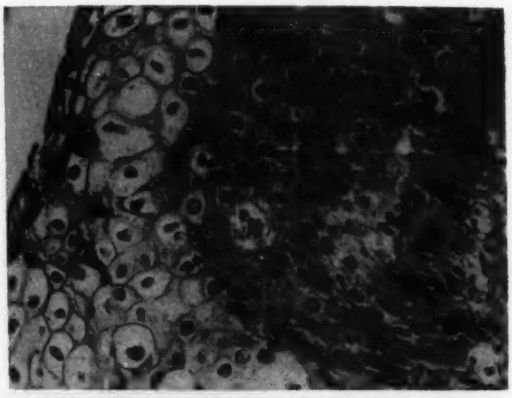


Fig. 11. Another case of epthelial dysplasia of cervix with involvement of the basal and spinous cell layers. The superficial squamos cells appear to be fairly well differentiated. Reduced from x 360.

epithelial layer. These cells have little cytoplasm. The nuclei are elongated, usually at right angles to the basement membrane, and show hypertrophy, hyperchromatism, and variability in size and shape, but less than that seen in the spinous cell type. In the basal cell type, large rete peg-like thickenings may be noted in the involved epithelium. In both forms of epithelial dysplasia, the squamous cells tend to mature and develop into cornified, small and normal cells on the surface. However, the degree of atypical nuclear change is also important, being less in dysplasia as compared with carcinoma in situ (fig. 14). In our group of dysplastic lesions, the majority are of the large cell or spinous cell type. Several cases show both large spinous cells and spindle or basal cell types.

The subsequent course of epithelial dysplasia is a subject still under investigation. It probably will be some time before the classification of this lesion becomes fully standardized and adequate data are at hand to determine accurately what course the lesion may follow. Certain points may be speculated upon now, however. There are different degrees of epithelial dysplasia of both types, and upon review of a number of these cases in retrospect it becomes feasible to classify them morphologically into mild, moderate, and severe forms. The latter closely approach carcinoma in situ. It seems probable that the development of carcinoma in situ is a definite possibility when the dysplasia is severe. Either it may be present in some area near to and continuous with the dysplasia, or it may develop within a short time apparently by progression of the dysplastic lesion. The less severe forms of dysplasia are probably more remotely related to carcinoma in situ and are more likely to regress under observation.

That some cases of dysplasia regress under observation seems well authenticated,[11] and perhaps more than 50 per cent may be expected to disappear. It should be noted, however, that in all cases which have been observed to regress, several cervical biopsies have been obtained as a means of following. This may have been responsible for destruction of the lesion, rather than true regression having occurred. Pregnancy does not appear to have any bearing upon the likelihood of a lesion disappearing under follow-up study.[10, 11]

Evidence that epithelial dysplasia is related to carcinoma of the cervix and may be followed by carcinoma in situ is fairly suggestive at this time. It is common practice to be able to trace the lesion dysplasia into carcinoma in situ in the same cervix. Basically, the morphologic changes of the cells in dysplasia are similar to, but less marked than, those of carcinoma in situ. It has been possible usually to differentiate the two processes in cervical cytologic smears with a fair degree of accuracy (fig. 15 and

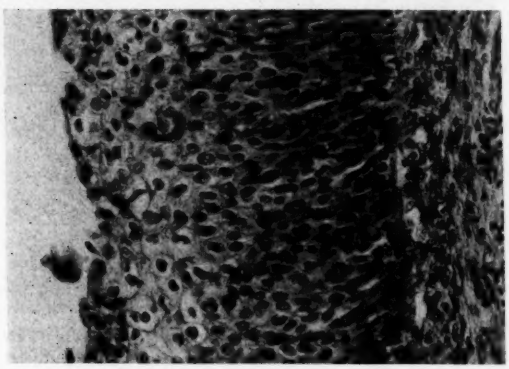


Fig. 12. Moderate epithelial dysplasia of the cervix, predominantly of the basal cell hyperplasia type. Reduced from x 360.

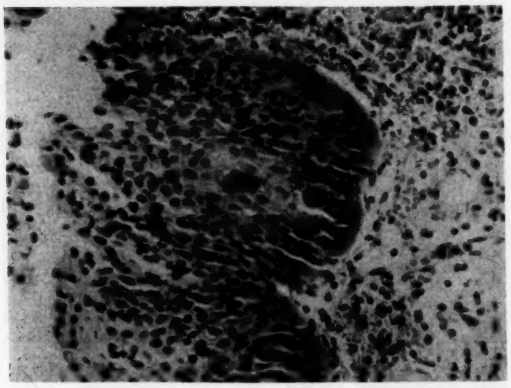


Fig. 13. Another case of epthelial dysplasia of the basal or spindle cell type. Reduced from x 360.

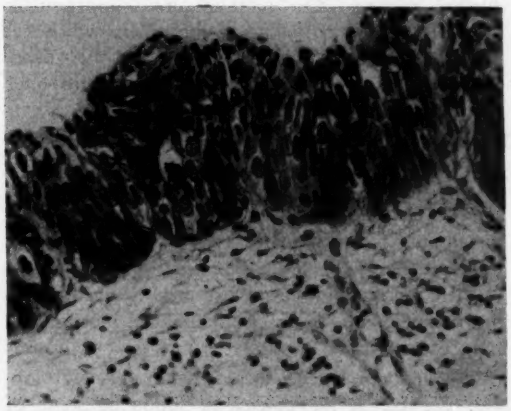


Fig. 14. Squamous cell carcinoma in situ of cervix. Predominantly basal cell configuration. There is a greater degree of nuclear abnormality than is seen in epithelial dysplasia, and the atypical changes involve the entire thickness of the epthelium. Reduced from x 360.

16). Epithelial dysplasia is found in a younger age group, averaging 25.1 years, as compared with 31.3 years in the cases of carcinoma in situ encountered in this study. It seems possible that a gradual transition might occur from dysplasia at 15 to 30 years of age, to carcinoma in situ at 30 to 40, and to invasive carcinoma at 40 to 50 years of age. Further evidence relating to the relationship of carcinoma in situ to dysplasia is the fact that some patients with dysplasia, when followed over a period of time by repeated biopsy, may be shown to manifest progressive atypical changes and ultimately develop carcinoma in situ.[12] More follow-up studies, however, are strongly indicated for further evaluation of the course of epithelial dysplasia.

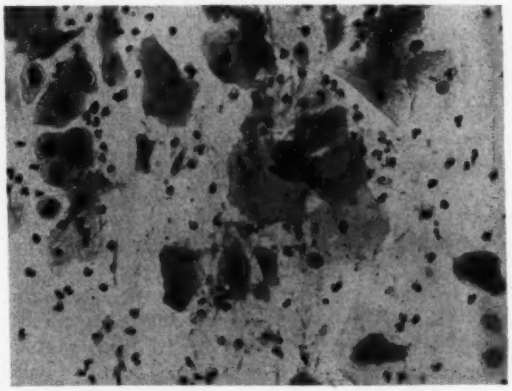


Fig. 15. Cervical cytology in case of epithelial dysplasia. Groups of parabasal and precornified squamous cells with nuclear hypertrophy and hyperchromatism. A definite cytoplasmic layer is apparent in these abnormal cells. Reduced from x 360.

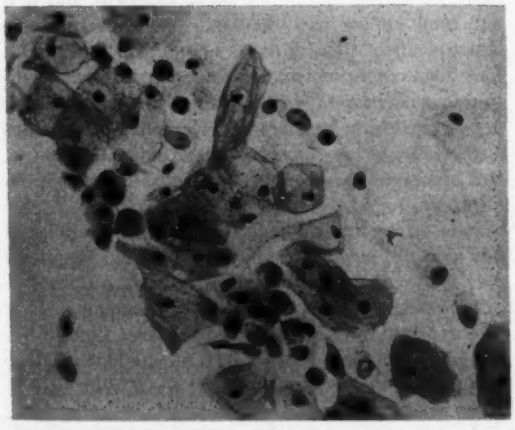


Fig. 16. Cervical cytology in case of squamous cell carcinoma in situ. The atypical cells have larger, more hyperchromatic nuclei than seen in dysplasia, and the cytoplasm is much less abundant. Reduced from x 360.

It is significant that in the majority of cases of epithelial dysplasia (88 per cent in our cases) suspicious cells will be found in the cervical smears. Most of these we have usually classified as Papanicolaou class III. Cervical punch biopsies are being utilized for the follow-up study at the present time. For more certain follow-up, in order to avoid destruction of the lesion by biopsies, cytologic studies might be more desirable, however, and we hope to be able to follow a selected group of cases by this means.

SUMMARY

Various atypical epithelial lesions which may be seen on histologic study of cervical biopsies have been reviewed. They include, in one group, hyperplasia due to regeneration of denuded epithelium, hyperplasia of the reserve cells, squamous metaplasia, epithelial atypism associated with epithelialitis, condyloma accuminatum, and condylomatoid hyperplasia. These forms are considered to be reversible and unrelated to the genesis of carcinoma of the cervix. They are important lesions to the pathologist, however, because of the need to differentiate them from presumably precancerous lesions.

In the second group of atypical epithelial growths are leukoplakia, epithelial dysplasia of the spinous cell or "koilocytotic" atypia type and the basal cell hyperplasia or spindle cell type, and neoplastic papilloma of the cervix. These varieties are considered to be potentially aggressive lesions which might proceed over a period of years into carcinoma in situ and invasive carcinoma. It is suggested that these particular forms of atypism be considered as precancerous changes and that they be subjected to careful clinical management in the form of follow-up study or local eradication.

REFERENCES

1. Ayre, J. E.: Vaginal Smear; "Precancer" Cell Studies Using Modified Technique, Am. J. Obst. & Gynec. 58:1205-1219 (Dec.) 1949.

2. Bechtold, E., and Reicher, N. B.: Relationship of Trichomonas Infestations to False Diagnoses of Squamous Carcinoma of Cervix, Cancer 5:442-457 (May) 1952.

3. Carson, R. P., and Gall, E. A.: Preinvasive Carcinoma and Precancerous Metaplasia of Cervix; Serial Block Survey, Am. J. Path. 30:15-29 (Jan.-Feb.) 1954.

4. Goforth, J. L.: Squamous Cell Papilloma of Cervix Uteri, South. M. J. 45:921-926 (Oct.) 1952.

5. Howard, L., Jr.; Erickson, C. C.; and Stoddard, L. D.: Study of Incidence and Histogenesis of Endocervical Metaplasia and Intraepithelial Carcinoma; Observations on 400 Uteri Removed for Noncervical Disease, Cancer 4:1210-1223 (Nov.) 1951.

6. Hypes, R. A., and Ladewig, P. P.: Leukocytic Clusters on Epithelial Cells in Cervico-Vaginal Smears: Presumptive Test for Trichomonas Infection, Am. J. Clin. Path. 26:94-97 (Jan.) 1956.

7. Koss, L. G., and Durfee, G. R.: Unusual Patterns of Squamous Epithelium of Uterine Cervix: Cytologic and Pathologic Study of Koilocytotic Atypia, Ann. New York Acad. Sc. 63:1245-1261, 1956.

8. Novak, E. R., and Galvin, G. A.: Mistakes in Interpretations of Intraepithelial Carcinoma, Am. J. Obst. & Gynec. 62: 1079-1085 (Nov.) 1951.

9. Papanicolaou, G. N.: Cytologic Diagnosis of Uterine Cancer by Examination of Vaginal and Uterine Secretions, Am. J. Clin. Path. 19: 301-308 (April) 1949.
10. Rawson, A. J., and Knoblick, R.: Clinicopathologic Study of 56 Cases Showing Atypical Epithelial Changes of Cervix Uteri, Am. J. Obst. & Gynec. 73:120-126 (Jan.) 1957.
11. Reagan, J. W.; Hicks, D. J.; and Scott, R. B.: Atypical Hyperplasia of Uterine Cervix, Cancer 8:42-52 (Jan.-Feb.) 1955.
12. Reagan, J. W.; Siedemann, I. L.; and Saracusa, Y.: Cellular Morphology of Carcinoma in Situ and Dysplasia or Atypical Hyperplasia of Uterine Cervix, Cancer 6:224-235 (March) 1953.
13. Von Haam, E., and Scarpelli, D. G.: Experimental Carcinoma of Cervix: Comparative Cytologic and Histologic Study, Cancer Res. 15:449-455 (Aug.) 1955.

Drs. Ashworth and Reynolds, Department of Pathology, University of Texas Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 19.

ABSTRACT OF DISCUSSION

DR. H. W. NEIDHARDT, Houston: In the course of making a detailed survey of such a considerable series of cervical biopsies as we have under consideration, it is to be expected that the several types of lesions as mentioned by Dr. Ashworth and Dr. Reynolds would be encountered, especially various types of epithelialitis. I would like to discuss these further.

These inflammatory conditions the authors properly set aside and center the greater part of their discussion on what they consider precancerous lesions.

In regard to epithelialitis, such as is seen in trichomonas changes, for example, it is helpful to remember that the atypical cellular changes are apt to be confined to the superficial cells of the mucosa whereas in precancerous conditions the changes are more apt to involve the deeper cells or the entire thickness of the mucosa. Another point is that clinically, inflammatory lesions, especially in viral cervicitis, are apt to be rapid in onset.

The most provocative aspect of this paper is that section which deals with what the authors call "epithelial dysplasia." Leukoplakia and papilloma are well recognized by the histopathologists, although I am not sure in my own mind that I could distinguish between the latter lesion and condyloma.

I heartily agree that leukoplakia is significant chiefly in calling attention to the type of abnormal epithelium associated with it in basing one's attitude in any given case accordingly.

Without doubt our greatest difficulty is with the authors' term "epithelial dysplasia." All of us who have had much experience with cervical biopsies have had moments of great indecision with those lesions which border on, but do not quite seem to fulfill the criteria for, carcinoma in situ. The concise definition in the paper indicates that this is the area in which we are here concerned; however, at the time of preparing this discussion I had not seen the slides illustrating the paper, and it was impossible for me to know exactly what was meant by the term "epithelial dysplasia." I guessed that the term approximates what we at the M. D. Anderson Hospital refer to as atypical epithelial hyperplasia. I would give assent to the notion that both a spinous and a basal cell pattern would be recognizable, but I feel that to assess mild, moderate and severe degrees to this condition on a purely histological basis might be open to question.

The phenomenon of regression under observation likely does occur, as in some cases of carcinoma in situ, and the point is well taken that in some cases lesions are destroyed by repeated biopsies. This then is an excellent argument for following these cases by means of exfoliative cytology.

Olaf Petersen,* in his lengthy monograph which appeared in *Acta Radiologica* in 1955, found many of his cases of a presumably similar type of lesion in the same age group as do present authors. In regards to follow-ups, Petersen reported a total of 126 patients in which he found that there was a steady increase in the incidence of cancer of the cervix until the end of the ninth year (from 3.9 per cent at the end of the first year to 33.3 per cent at the end of the ninth year). However, Petersen's photomicrographs look fairly like what we have been calling carcinoma in situ, which may account for his figures.

It is to be hoped that Dr. Ashworth and his associates at some future date will be able to present us with follow-up data, if only with a fraction of his impressive series of 1,860 cases with cervical biopsy.

**Petersen, O.: Precancerous Changes of Cervical Epithelium in Relation to Manifest Cervical Carcinoma; Clinical and Histological Aspects, Acta Radiol. (Supp. 127) pp. 1-168, 1955.*

Uterine Carcinoma Of Gartner Duct Origin

JOHN J. ANDUJAR, M.D., and FRANCIS E. COUNCIL, M.D.

Fort Worth, Texas

IT IS A WELL known fact that nearly all females have vestigial remnants of male mesonephric (Wolffian) duct elements. Generally, these are concentrated in the area of the broad ligament, and it is also well known that they may be present in the lateral walls of the vagina, as Gartner duct remnants. It is not so well known that these remnants in a definite proportion of females enter the wall of the uterus, reaching rather deeply into the fundus (especially in the Japanese) and into the portio, and sometimes even into the cervix (especially in Europeans).

It is a little known fact, however, that neoplasms can and do arise from these remnants. There are only approximately one dozen reports of uterine carcinoma originating in Gartner duct remnants, mostly in the portio and cervix. Since the first description is more than half a century old, one would think that the tumor is among the rarest of all, but this is

Dr. John J. Andujar and his co-author operate the Fort Worth Medical Laboratories. The paper was presented for the Section on Pathology at the Texas Medical Association annual session April 21, 1958, in Houston.

simply not the fact. In 1903, Robert Meyer,[6] writing in *Virchows Archiv für pathologische Anatomie und Physiologic und für klinische Medizin,* published a complete paper outlining the frequency and appearance of the Gartner duct remnants in the uterus. He referred to the ampulla of the Gartner duct and pointed out the branching components present in the endocervix and cervix. From the start, there was wide difference of opinion as to the incidence of these cervical Gartner duct remnants. Wolfe,[13] of New York, in one paper stated that it was 1 in 1,413 uteri. His report, appearing in 1941, is, curiously enough, the first reference in the American literature; and it appeared almost 50 years after Meyer's original article. The published reports since that time have ranged from a high of nearly 40 per cent of all uteri to a low of 0.1 per cent of all uteri showing Gartner duct remnants. This is a tremendous disparity of incidence.

In examining 1,716 uteri removed by complete hysterectomy, we attempted to determine the incidence of these Gartner duct remnants by step sectioning the portio and cervix horizontally at intervals of a few millimeters. This was necessarily done in four quadrants, but the completed patterns produced a reasonably representative figure for each level. Of the 1,716 uteri examined, we found reasonably characteristic Gartner duct remnants in a total of only 36, or an incidence of almost exactly 2 per cent. Quite frequently, the remnants were located in the high portio and, in fact, sometimes in the deep myometrium, almost beneath the endometrial layer. Branching remnants were commoner in the sections from the high portio. There is considerable compression and distortion, especially of the branched and atrophic remnants. This is well illustrated in the excellent sketches of Meyer of more than 50 years ago. It should be noted that the paper by Meyer[7] in 1906 showed remnants in 20 per cent of cervices and portiones vaginalis examined on near term fetuses. This contrasts sharply with their own low incidence in adults. Of interest is the fact that in uteri in our series showing a residual septum, either completely bifid or simply with a partial separation, the incidence of Gartner duct anomalous remnants was 28.5 per cent, there being 14 such uteri, with 4 showing anomalies. The bicornuate series, however, is too small to be of statistical significance. All of this material originated in adult white females, mostly residents of the southwestern part of the nation.

Gartner duct remnants in the uterus may give rise to neoplasms. There is a wide difference in reported incidence of such lesions. An examination of 1,716 uteri indicates that a deceptive histologic pattern and a lack of awareness of the Gartner duct carcinoma may lead to erroneous diagnosis. The benign appearance of the carcinoma is belied by its clinical course.

It should be emphasized that it is easy to mistake displaced endocervical gland remnants for true Gartner duct remnants. They are, of course, ordinarily quite different; the endocervical epithelium secretes mucus, whereas the Gartner duct epithelium does not. The mucicarmine stain is essentially negative in all Gartner duct remnants, whereas endocervical remnants will show marked mucin production.

One of the great factors in the supposed rarity of this lesion is the highly deceptive histopathologic pattern. We believe that it is possible that these tumors of the cervix are being classified under various different designations. Another important point is the complete discrepancy between the histologic pattern and the eventual course of the tumor. In this regard, the lesion can be classed as being in the same group with so-called benign thyroid lesions which appear as metastases in bone at a later date or are even diagnosed first from the metastasis. In both of our cases, the histologic pattern was innocent, indeed, and one saw cells which, if they were considered epithelial at all, were certainly perfectly benign from all characteristics. The ordinary cytologic and histologic criteria of anaplasia are all of no avail. In fact, this tumor is easily mistaken for a granulomatous process, or so-called histiocytoma. Pathologists of wide experience have fallen into this trap.

Other features of the microscopic pattern lead one to classify this also as benign adenomatoid tumor. The additional term of Gartner duct adenoma is open to much question because of the deceptive benign appearance previously mentioned.

Sometimes there is reduplication of tubular elements, from which the tumor is erroneously reported as Gartner duct "adeno" carcinoma. The duct, of course, is simply a conductor, and since it is not a true gland, the term adenocarcinoma is a misnomer. The tumor also can be mistaken for paraganglioma because of the large cells with abundant cytoplasm. Both this diagnosis and also granular cell myoblastoma have been advanced for these lesions.

CASE REPORTS

CASE 1.—Mrs. C. D., 20, white, wife of a farmer in Arkansas, sought medical advice in October, 1937, for a mild but persistent vaginal discharge. This young woman had been married approximately 2 years, but had never been pregnant. Her visit was primarily for investigation of possible sterility. She had no signs or symptoms of any difficulty except that in the right lip of the cervix, there was a tumorous area approximately 1 cm. in diameter, with a small draining crater approximately 3 mm. across leading upward (into the endocervix) at a point approximately 1 cm. from the os. The mucosa was somewhat reddened, but aside from the small depressed crater previously described, there was no unusual finding. The attending

physician felt this might be a Nabothian cyst, or perhaps an accessory cervical os.

After incision and drainage failed to stop the process, a fairly large biopsy specimen was obtained. This particle, approximately 18 by 12 by 9 mm., showed a granular, grayish-white appearance, with no particular suggestion of a tumor or of a capsule. The microscopic picture was unusual, showing whole series of duct spaces lined by a single layer of flattened epithelium which did not carry any mucin. Adjacent to these duct areas were sheets of large, foamy, pinkish cells which in rare instances would show a "cartwheel" appearance which might have given a clue as to the nature of the lesion. The complete lack of mucin also should have given a hint as to the classification, but it did not at the time. The large, foamy cells were considered to be histiocytes, and in view of the repeated draining sinus, it was thought that this was a granuloma of the histiocytic type, and so reported.

An effort was made to cauterize the lesion deeply, but following this one attempt, the patient refused further treatment and consulted an irregular practitioner of one of the cults. She did not return to her family doctor until the final days of her life, approximately 8 months later, at which time she was obviously moribund. A roentgenogram of the chest was obtained shortly before death, and it showed extensive replacement of lung tissue by irregular, poorly defined, shadowy masses, which were interpreted as consistent with a granulomatous lesion of unclassified type. The patient was in extremis, and physical examination was not too satisfactory, but the pelvis was frozen into a rather solid mass in the lowermost portion, adjacent to the ragged, granular cervix. Some of this rather friable material was obtained shortly prior to death. Valid autopsy consent could not be obtained, but a group of small cylinders of pulmonary tissue were recovered from the aspirating trocar in preparation of the body for burial. The cell type from cervix and lung seemed identical to the original material examined. It was sent to several consultants of considerable experience, and the impressions advanced were in the nature of histiocytic granuloma and granuloma, unclassified. One person stated that this might be a mucinous adenocarcinoma with metastasis, but did not explain the complete lack of mucin. The material has been reviewed since, and the classification nearly 20 years later is now obvious.

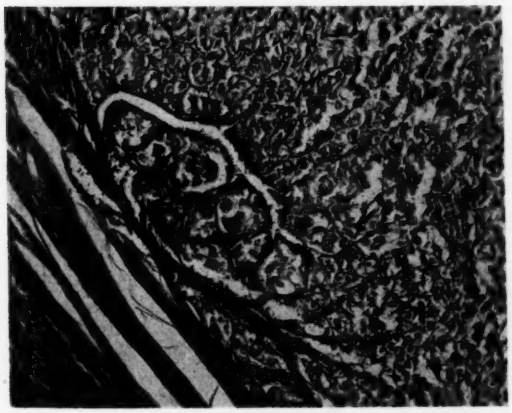


Fig. 1. Gartner duct carcinoma of cervix showing ductlike structure. Reduced from x 115.

CASE 2.—Mrs. B. L., 25, white, a clerical worker in a Texas hospital, was admitted to the same hospital in September, 1955, with a working diagnosis of cervical fibroids and possible right ovarian cyst, with adenomyosis. Aside from a chronic vaginal discharge, there was nothing of note in the history. The tumor of the cervix had been discovered in another city during a physical examination 3 or 4 months prior to operation. The patient had never been pregnant and in fact came to the physician for investigation of sterility.

The uterus was relatively small and slightly displaced to the left. A 4 cm. ovarian cyst was palpated on the right side. The cervix showed a swelling, or tumorous area, approximately 3 cm. in diameter on the anterior lip, toward the right side. This area of tumor appeared to be quite hard to palpation and was thought to be fibrous externally. When the lesion was incised for biopsy, cheesy appearing material was found. A section was removed for microscopic study, and a tentative diagnosis of possible adenomatoid tumor or possible atypical adenocarcinoma was considered. The outside possibility of a feebly malignant Wolffian duct carcinoma also was mentioned by the pathologist.

The uterus subsequently was removed with tubes and ovaries. The patient had advanced endometriosis, a presumably unrelated finding. The tumor itself was seen in the right anterolateral surface of the uterus, and occupied most of the cervix and endocervix in this area. It was, as stated, approximately 3 cm. in diameter and showed bloody discoloration from recent incision and biopsy. There was no capsule of any type, and the tumor seemed to merge with the contiguous musculature of the uterus.

The microscopic pattern was puzzling. The cells were large and rather pinkish in color, with round or polyhedral edges. The nuclei were pale and slightly vesicular, with no mitotic figures of any kind seen, either benign or malignant. In occasional rare fields, one could see a cartwheel pattern, which is the nearest to a glomerulus that could be observed. It should be emphasized that there is far more tubular pattern to this tumor than there is glomeruloid element; and in fact, all authors have been impressed with the lack of reproduction of any structure truly resembling glomeruli. The tubular pattern in this case is far less well developed than in case 1. There was no mucin elaborated. Moderate tissue necrosis was evident, accounting for the cheesy or caseous appearance grossly.

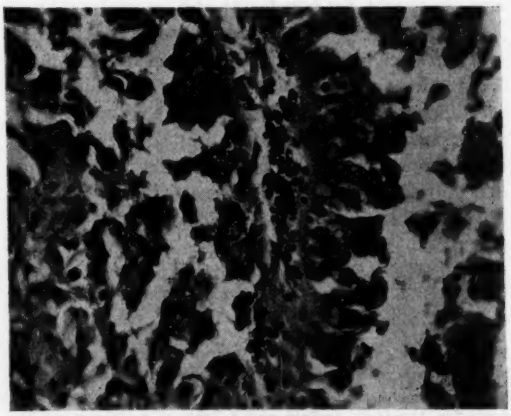


Fig. 2. Gartner duct cancer showing large foamy "histiocytic" cells lining ductlike tubules. Reduced from x 305.

The material was sent to a number of consultants, including a highly capable urologic pathologist. The diagnoses submitted by various consultants included myoblastoma, adenomatoid tumor, paraganglioma, histiocytic granuloma, oncocytoma, histiocytoma, and reticulo-histiocytic granuloma. All, however, seemed somewhat uncertain as to exact classification.

Later, the material was submitted to Dr. Frank W. Foote, Jr. of Memorial Hospital, Dr. Emil Novak of Johns Hopkins University School of Medicine, and Dr. Arthur Hertig of Harvard University School of Medicine. Independently of each other, and without any coaching, each submitted a diagnosis of Gartner duct carcinoma. Review of the literature and the published cases promptly reinforced the correctness of this opinion; and in fact, additional sections made (above the tumor high in the portio and low fundus) show slightly distended Gartner duct remnants.

The patient was not given radium or roentgen ray, since all three consultants considered that this lesion was practically benign. In the light of later knowledge, this does not appear to have been quite so certain, but in view of the rather wide hysterectomy, further treatment seemed unnecessary.

DISCUSSION

If one were to be guided entirely by the few cases recorded in the literature, one would assume that (1) this tumor is exceedingly rare; (2) it is easily recognized; and (3) it is only feebly anaplastic. All three of these premises are erroneous. The tumor is probably not anywhere near so rare as one would conclude, and in a personal communication Dr. Frank Foote of Memorial Hospital said that he alone has 7 cases, which he expects to report later. This would sharply increase the total number of one dozen cases in literature, and it is possible that other centers have similar cases, either recognized or unrecognized.

Dr. Gunnar Teilum, in a personal communication, also has emphasized that he thinks these Gartner duct tumors are much commoner than the present statistics would lead one to believe. He believes that this is true not only of the cervix, but also of other areas in the female genital tract.

That the tumor is benign in appearance cannot be gainsaid, but that it is malignant in its course, and sometimes very highly so, is also evident. It should be noted that all three of the consultants in case 2 who arrived at the correct diagnosis emphasized the feebly malignant nature of this tumor. Additional consultants in recently reviewing the material from case 1 also expressed the opinion that the tumor was feebly malignant, but they did not know that metastasis had killed the young woman in less than a year. It is possible that the patient in case 2 has been cured, as a result of the institution of early and vigorous therapy, but survival for 3 years does not provide a warranty as to cure.

A surprising number of bifid uteri show Gartner duct remnants. Unlike the normal uteri, which show increased numbers of Gartner duct tubules on the one side, the bifid uteri show just as numerous Gartner duct remnants on the left as on the right.

Another noteworthy feature is the youth of most patients with this lesion. Although Meyer's case[6] was in a woman of 49, most are in the 20 to 30 year group, and even younger.

A rather curious finding in our 2 cases is that both these young women first sought medical aid for sterility. It is, of course, probably pure coincidence.

SUMMARY

Two cases of Gartner duct carcinoma of the cervix are reported, both in young women in their twenties, both sterile. One was promptly fatal, whereas the second case presents no evidence of metastasis 3 years after original surgery.

From the literature standpoint, Gartner duct carcinoma is exceedingly rare, there being a dozen cases reported in half a century. This rarity is curious and is probably due to lack of awareness of the tumor by clinicians and pathologists, coupled with a deceptive histologic pattern, leading to erroneous diagnosis of these tumors.

The Gartner duct carcinoma pattern is benign in appearance, but the clinical course belies the innocent histologic pattern. In the majority of the cases recorded, these patients later developed metastases and died, in spite of innocent appearing histologic patterns.

This tumor deserves far more attention and thought from clinicians and pathologists in order effectively and accurately to classify and combat this neoplasm.

We are deeply indebted to Dr. Jack Long and to Dr. Russell K. Williams for generous assistance and encouragement in the preparation of this report.

REFERENCES

1. Campana, L. P., and Schadt, T. E.: Mesonephric-Duct Adenocarcinoma, Am. J. Obst. & Gynec. 70:444-446 (Aug.) 1955.
2. Curtis, A. H., and Huffman, J. W.: Textbook of Gynecology, ed. 6, Philadelphia, W. B. Saunders Co., 1950, pp. 42, 667-670, 690-691.
3. Huffman, J. W.: Mesonephric Remnants in Cervix, Am. J. Obst. & Gynec. 56:23-40 (July) 1948.
4. Jones, H. W., and Seegar, G. E.: Mesonephroma of Ovary, Am. J. Obst. & Gynec. 39:322-329 (Feb.) 1940.
5. Lee, M. J., Jr.; Dockerty, M. B.; Thompson, G. J.; and Waugh, J. M.: Benign Mesotheliomas (Adenomatoid Tumors) of Genital Tract, Surg., Gynec., & Obst. 91:221-231 (Aug.) 1950.
6. Meyer, R.: Ueber Adenom-und Karzinombildung an Der Ampulle des Gartner'schen Ganges, Virchow's Arch. f. Path. Anat. [etc.], Berl. 174:270-294, 1903.
7. Meyer, R.: [Lipome der Genitalien.] Zschr. f. Geburtsh. u. Gynäk. Stuttg. 58:463, 1906.
8. Nace, F. M.: Carcinoma of Mesonephric Duct, Am. J. Obst. & Gynec. 63:914-916 (April) 1952.
9. Novak, E.; Woodruff, J. D.; and Novak, E. R.: Probable

Mesonephric Origin of Certain Female Genital Tumors, Am. J. Obst. & Gynec. 68:1222-1242 (Nov.) 1954.
10. Teilum, G.: "Mesonephroma Ovarii" (Schiller), Extra-Embryonic Mesoblastoma of Germ Cell Origin in Ovary and Testis, Acta Path. et Microbiol. Scandinav. 27:249-261, 1950.
11. Teilum, G.: Histogenesis and Classification of Mesonephric Tumors of Female and Male Genital System and Relationship to Benign So-Called Adenomatoid Tumors (Mesotheliomas); Comparative Histological Study, Acta Path. et Microbiol. Scandinav. 34:431-481 (May) 1954.
12. Wagner, G. A.: Karzinom des Gartner's Chen Ganges, Zentralblatt f. Gynäk. 53:1336-1337, NR. 18-35 (May-Aug.) 1929.
13. Wolfe, S. A.: Gartner's Duct Lesions of Cervix, Am. J. Obst. & Gynec. 39:312-322 (Feb.) 1940.

♦ Drs. Andujar and Council, Fort Worth Medical Laboratories, 1404 Pennsylvania Avenue, Fort Worth.

ABSTRACT OF DISCUSSION

DR. A. J. GILL, Dallas: Most of us tend to forget the rather frequent occurrence of remnants of the caudal portions of the mesonephric duct system in the lateral portions of the cervix and uterus. It is partly because routine sectioning oftentimes does not pass through the planes necessary, and also it seems likely that even when such remnants are observed casually, their origins may not be appreciated and definite identification may be in error. The authors have pointed out that it is entirely possible that malignant tumors arising in these Gartner duct remnants may be much more common than is generally recognized. I suspect that many of us, in thinking back over cases studied in the past, may now be moved to wonder if some of the unusual tumors seen in this area may not in fact belong in the classification of Gartner duct carcinoma. It is especially interesting that in the cases so classified the majority appear to have occurred in younger age groups and in some instances even in childhood.

Apparently the clinical behavior of this group of tumors has been variable, and, as has been pointed out in this paper, the behavior may be surprising when related to the morphologic appearance of the tumor in section. It seems to me that the age incidence, the apparent lack of correlation of morphology and behavior, and the probable frequency of misinterpretation of histogenetic background in tumors of mesonephric remnants are the outstanding features well emphasized in this paper. After reading several of the recent references reporting such tumors, it appears to me that they present a wide variety of morphologic patterns and that the common origin of a considerable group of unusual cervical tumors may be obscured by the varying descriptive and diagnostic terms which seem to be in current use.

No Medicine for Some Patients

One-third of the sick people do not get their prescribed medicines for one reason or another, according to Lee L. Gibson, vice-president of Lakeside Laboratories of Milwaukee. Mr. Gibson spoke to the annual convention of the Massachusetts Pharmaceutical Association.

Results of two studies showed that sometimes the pharmacist did not have the prescribed drug in stock, sometimes the patient "felt better" after he received the prescription and did not go to the druggist, and sometimes the patient recognized the prescription and went against his doctor's orders because he "didn't believe in the drug."

Role of Diuretics In Pregnancy

Preliminary Report

DENNIS M. VOULGARIS, M.D.

Wharton, Texas

THE CONTINUING problem of toxemia of pregnancy is well known to all who practice obstetrics. In spite of the strides being made in other aspects of prenatal care, obstetricians are beset with problems that develop as a direct result of the hypertensive and/or renal syndrome occurring during pregnancy. Both maternal and fetal loss continue in spite of the constantly improving trends in maternal care.

At this writing, there is much conjecture as to the origin of the physiopathological picture of the hypertensive and/or renal syndromes. Until we know more specifically what the inciting, etiologic factor(s) is that sets the process into motion, our therapy will be based on the empirical treatment of the symptoms that result therefrom.

Dr. Dennis M. Voulgaris presented this paper for the Section on Obstetrics and Gynecology at the Texas Medical Association annual session April 21, 1958, in Houston.

Edema seems to be the common denominator in eclampsia. In efforts to forestall edema, Diamox was given routinely to patients seen from 1955 through 1957, a total of 220 patients. Results of this preliminary study suggest that women in whom Diamox was used prophylactically had appreciably less toxemia and that neither the mothers nor the infants showed undesirable side effects.

Edema seems to be the common denominator in both nonconvulsive and convulsive eclampsia. What causes the hydremia of pregnancy? Is physiologic hydremia as physiologic as we would allow ourselves to believe? Should we continue to base our treatment of the edematous patient on the belief that a certain amount of fluid retention is normal? Not all gravid women have edema, but in my experience it has been rare indeed to find "eclampsia"

in a woman who has not experienced fluid retention, occult or otherwise. Is there a difference in the physiologic hydremia of pregnancy and that which is the precursor of the toxemia? When does the process change from one to the other? When does the process change from one of reversibility to one of irreversibility? These questions, for the most part, are unanswered. It was for this reason that I became interested in what the eventual outcome would be if one could prevent or minimize the hydremia occurring during pregnancy. With this basic premise in mind, I set out in 1955 to use an oral diuretic throughout the entire pregnancy as a prophylactic medication. It was my desire to see what the end result would be as to the number of toxemias as compared to other years.

I would like to state at this point that this is not a well controlled scientific investigation. There were no control groups as such; however, I have practiced in the same manner prior to and since the use of this medication. The patients seen before and after the trial investigation are my controls. The end results and their interpretation are based upon my observation of the patients and their response to the medication. I am sure they include, to some degree, the bias of the investigator.

Diamox was used as the drug because it was easily tolerated and required the least dosage. I was aware of its efficacy in the treatment of known or visible edema of pregnancy, since it had been used so frequently for that.

A brief word as to the action of Diamox (acetazolamide): Its development as a diuretic was as a result of work done on the sulfonamides. This product was eventually developed as the most potent, with the least evidence of side effects. It acts as a carbonic anhydrase inhibitor. Normally the carbonic anhydrase enzyme catalyzes the hydration of carbon dioxide to carbonic acid and the reverse dissociation of carbonic acid to water and carbon dioxide. If the enzyme is inhibited, the availability of the hydrogen ion for the ion exchange reactions in the kidney is interfered with, resulting in excessive loss of sodium and bicarbonate ions in the urine. Acidosis could be produced in this way. Acetazolamide gave the best results with the fewest side effects.

As far as I could ascertain from the literature, there are numerous reports concerning the use of the diuretics after edema became obvious or after the toxemia was present. Since 1955, however, I have been using this preparation as a routine medication early in pregnancy to attempt to prevent fluid retention.

CLINICAL MATERIAL

All of the patients were from my private practice from 1955 through 1957. There were no controls, as such, but the basic prenatal care was unaltered during the period of evaluation. In effect, there has been no alteration prior to or following the investigation. The patients in the preinvestigative and postinvestigative period were compared with those during the investigation, as to their complications.

PROCEDURE

All patients had the usual physical examination and laboratory studies in the first trimester. Any patients seen after the fifth month were not included. Careful evaluation was made to rule out any patients with preexisting or latent hypertension. Patients with previous renal disease and those who had had previous toxemias were used in this series if there was no evidence of the disease at the beginning of the pregnancy.

Hemoglobin and hematocrit readings were done at intervals. Select groups had serum protein determinations. However, more detailed evaluation was not done because of the added expense to the patient.

The dosage was kept constant with only a slight variation in method of administration. One 250 mg. tablet was taken each day upon arising. This was taken 3 days consecutively; then stopped for 1 day; then repeated. Some took 250 mg. daily for 6 days; then stopped one day; and then repeated the medication. The drug was begun between the twentieth and twenty-second week of gestation. The patients were seen at frequent intervals. The blood pressure, weight, evidence of edema, hematocrit and hemoglobin levels, subjective sensations, and possible toxic or side effects were recorded.

After delivery, the postpartum weight loss was recorded.

Evaluation of the infant was considered to be essential. In every case, a thorough examination was done in order to determine any possible side or toxic effects on the newborn. These included: (1) premature delivery, (2) congenital defects, (3) difficult or increased frequency of resuscitation, (4) dehydration, (5) feeding problems, and (6) weight loss in the neonatal period.

A comparison of maternal complications, such as placenta previa and abruptio, before, during, and after the investigation, was also made.

RESULTS

The end results obtained for the control of weight gain were encouraging. Prior to the use of the drug at a definite time, it had been used after the onset of a sudden weight increase whether edema was present or not. The rapid weight losses were amazing.

In surveying the weight gains prior to and following this survey, the average weight gain was 15 to 30 per cent greater after the twentieth week as compared to the first 20 weeks.

The average weight gain per month in the nonmedicated group was 4.5 pounds. The average weight gain per month in the medicated group was 2.2 pounds. In the control group, only 1 of 240 patients weighed less at term than at 20 weeks. In the medicated group of 220 patients, 39 weighed less at term than at 20 weeks. In the control group, invariably the last 6 weeks were accompanied by excessive gain periods. In the other group, weight gain was minimal or not at all during this period. In many instances, the greatest weight loss occurred at this time.

During the entire survey, no attempt was made to control weight gain by diets. In addition, there were no restrictions placed on the types of foods; and salt was not restricted.

There seemed to be a direct relationship between the hemoglobin and hematocrit levels and the relative fluid (weight loss). There was less correlation with the serum protein levels. The significance of both these results is questionable in view of the small number of cases studied.

I found no evidence of toxicity in the dosage employed.

Side effects consisted of minimal nausea and occasional minimal paresthesia associated with transient acidosis. In no case was it necessary to discontinue the use of Diamox. The number of toxemia patients seen during the year of study consisted of 1 patient whose disease was associated with or immediately preceded a severe case of Graves' disease which necessitated thyroidectomy during pregnancy, and another case of transient hypertension without renal disease which did not require therapy. The number of toxemias seen prior to and following the study varied between 4 and 8 per cent. I believe these facts to be significant, but the small number of cases studied may well minimize that significance.

The postpartum weight in the hospital more closely approximated the prenatal weight in the Diamox group as compared with the control group.

There was no substantial change in the maternal complications in the test group as compared with the control group. It is believed that, from this standpoint, the drug is safe.

A significant finding in the newborn infants was the relatively slight weight loss. The weight loss in the newborn of the test group was less than half of that in the control group.

There was not a single fetal death in the premature infants born of the test group as compared with the 33 to 50 per cent premature fetal loss in the control group. However, this type comparison will not stand close inspection because of other related factors.

There was no increase in congenital anomalies.

The usual degree of edema present in the premature newborn was not present. This, however, was only a clinical observation noted by the pediatrician.

DISCUSSION

I believe there is some evidence of significance in the results obtained in the reduction of the number of patients with toxemias. The importance of such a contribution based on a small series is questionable. This paper, however, is given only as a preliminary report. It is for this reason that I think a more widespread use of the drug is indicated, especially in the areas where the incidence of toxemias is still overwhelming and where the nature of the clinical material is such that significant statistics can be accumulated readily.

I am of the opinion that, with prophylactic treatment, the dangers to mother and child from toxemias can be lessened, if not eradicated.

♦ Dr. Voulgaris, 105 Hawes Street, Wharton.

Booklet Gives Facts About Heart Disease

Heart disease costs the United States government over $700,000,000 annually, according to *Patterns of Disease*, a booklet prepared by the Parke, Davis & Company. Loss in working time caused by the disease amounts to approximately $3,000,000 per year.

The booklet also states that $33,672,725 is spent on research support of the disease and that over half of the victims of coronary heart attacks are striken while resting or sleeping.

Grants Awarded Psychiatric Association

A $100,000 grant was given to the American Psychiatric Association by the Smith Kline & French Foundation to continue the foundation's fellowships in psychiatry through 1960. These fellowships were established in 1955 with a 3 year $90,000 grant from the pharmaceutical firm. The association announced that more than 150 physicians and medical students have benefited from the fellowship awards.

★ Coming Meetings

Texas Medical Association, San Antonio, April 18-21, 1959 (Conference of County Medical Society Officials and Symposium on Legislation, Jan. 24, 1959). Dr. Howard O. Smith, Pres.; Mr. C. Lincoln Williston, 1801 North Lamar Blvd., Austin, Exec. Secy.

American Medical Association, Clinical Meeting, Minneapolis, Dec. 2-5, 1958. Dr. Gunnar Gundersen, La Crosse, Wis., Pres.; Dr. F. J. L. Blasingame, 535 North Dearborn, Chicago 10, Exec. Vice-Pres.

Current Meetings

SEPTEMBER

American Association of Obstetricians and Gynecologists, Hot Springs, Va., Sept. 4-6, 1958. Dr. William F. Mengert, Chicago, Pres.; Dr. E. Stewart Taylor, University of Colorado School of Medicine, 4200 E. 9th, Denver, Secy.

Tri-State Medical Assembly, Shreveport, Sept. 10-11, 1958. Dr. Jack Guthrie, Camden, Ark., Pres.; Dr. Jason Sanders, Sanders Clinic, Kings Highway, Shreveport, La., Secy.

Texas Academy of General Practice, San Antonio, Sept. 22-24, 1958. Dr. G. W. Cleveland, Austin, Pres.; Mr. Donald C. Jackson, 1905 N. Lamar, Austin, Executive Secy.

OCTOBER

American Academy of Ophthalmology and Otolaryngology, Chicago, Oct. 12-17, 1958. Dr. LeRoy A. Schall, Boston, Pres.; Dr. W. L. Benedict, 15 Second St. S.W., Rochester, Minn., Secy.

American Cancer Society, New York, Oct. 29-31, 1958. Dr. L. T. Coggeshall, Chicago, Pres.; M. R. Runyon, 521 W. 57th, New York, Executive Vice-Pres.

American College of Gastroenterology, New Orleans, Oct. 19-25, 1958. Dr. C. Wilmer Wirts, Philadelphia, Pres.; Mr. Daniel Weiss, 33 West 60th, New York 23, Executive Director.

American College of Surgeons, Chicago, Oct. 6-10, 1958. Dr. William L. Estes, Bethlehem, Pa., Pres.; Dr. Michael L. Mason, 40 E. Erie, Chicago 11, Secy.

American Heart Association, San Francisco, Oct. 24-28, 1958. Dr. Robert W. Wilkins, New York, Pres.; Mr. John D. Brundage, 44 E. 23rd, New York 10, Secy.

American Public Health Association, St. Louis, Oct. 27-31, 1958. Roy J. Morton, Oak Ridge, Tenn., Pres.; Dr. Berwyn F. Mattison, 1790 Broadway, New York 19, Executive Secy.

American Society of Anesthesiologists, Pittsburgh, Pa., Oct. 19-24, 1958. Dr. Ralph S. Sappenfield, Miami, Pres.; Dr. J. E. Remlinger, Jr., 188 W. Randolph, Chicago 1, Secy.

Association of American Physicians and Surgeons, Interim Meeting, Chicago, Oct. 10-11, 1958. Dr. Mal Rumph, Fort Worth, Pres.; Mr. Harry E. Northam, 185 N. Wabash Ave., Chicago 1, Executive Secy.

Southern Psychiatric Association, Tennessee, October, 1958. Dr. Frank Luton, Nashville, Pres.; Dr. Iverson O. Brownell, Greenville, S. C., Secy.

Southwest Regional Cancer Conference, Fort Worth, Oct. 16, 1958. Dr. O. J. Wollenman, Fort Worth, Chm.; Mrs. Ira Frances Ball, 264 W. 11th, Fort Worth, Secy.

Southwestern Medical Association, Tucson, Ariz., Oct. 23-25, 1958. Dr. Louis G. Jekel, Phoenix, Pres.; Dr. Russell L. Deter, 1501 Arizona, El Paso, Secy.

Texas Pediatric Society, Fort Worth, Oct. 17-18, 1958. Dr. T. J. McElhenney, Austin, Pres.; Dr. James N. Walker, 5216 W. Freeway, Fort Worth, Secy.

Texas Surgical Society, Galveston, Oct. 6-7, 1958. Dr. J. Peyton Barnes, Houston, Pres.; Dr. G. V. Brindley, Jr., Scott and White Clinic, Temple, Secy.

Fourth District Society, San Angelo, Oct. 19, 1958. Dr. Fred D. Spencer, Brownwood, Pres.; Dr. W. Lacey Smith, 111 E. Harris, San Angelo, Secy.

Eighth District Society, Galveston, October, 1958. Dr. John H. Childers, Galveston, Pres.; Dr. M. Warren Hardwick, 839 E. Mulberry, Angleton, Secy.

North Texas-Southern Oklahoma Fall Clinical Conference, Wichita Falls, Oct. 18, 1958. Dr. J. B. Hathorn, Jr., 1500 8th, Wichita Falls, Chm.

Oklahoma City Clinical Society Conference, Oklahoma City, Oct. 27-29, 1958. Dr. Herman Fagin, Oklahoma City, Pres.; Miss Alma F. O'Donnell, 503 Medical Arts Bldg., Oklahoma City 2, Executive Secy.

Texas State Board of Examiners in Basic Sciences, Austin, Oct. 13-14, 1958. Henry B. Hardt, Ph.D., Fort Worth, Pres.; Mrs. Betty J. Anderson, Chief Clerk, 303 East Seventh, Austin.

National and Regional

American Academy of Allergy, Chicago, Feb. 9-11, 1959. Dr. Max Samter, Oak Park, Ill., Pres.; Dr. Bram Rose, Royal Victoria Hospital, Montreal, Canada, Secy

American Academy of Dermatology and Syphilology, Chicago, Dec. 6-11, 1958. Dr. James R. Webster, Chicago, Pres.; Dr. R. R. Kierland, Mayo Clinic, Rochester, Minn., Secy.

American Academy of General Practice, San Francisco, April 6-9, 1959. Dr. Holland T. Jackson, Fort Worth, Pres.; Mr. Mac F. Cahal, Volker Blvd. at Brookside, Kansas City 12, Executive Secy.

American Academy of Pediatrics, Chicago, Oct. 20-23, 1959. Dr. Stewart H. Clifford, Brookline, Mass., Pres.; Dr. E. H. Christopherson, 1801 Hinman Ave., Evanston, Ill., Secy.

American Association for Maternal and Infant Health, 1960. Mr. Howard I. Wells, Jr., 116 S. Michigan Ave., Chicago 3, Executive Secy.

American Association for Thoracic Surgery, Los Angeles, April 21-23, 1959. Dr. Michael E. DeBakey, Houston, Pres.; Dr. Hiram T. Langston, 7730 Carondelet Ave., St. Louis 5, Secy.

American Association of Genito-Urinary Surgeons, Absecon, N. J., April 15-17, 1959. Dr. John A. Taylor, New York, Pres.; Dr. W. J. Engel, 2020 E. 93rd St., Cleveland 6, Secy.

American College of Allergists, San Francisco, March 15-20, 1959. Dr. Merle W. Moore, Portland, Ore., Pres.; Dr. M. Coleman Harris, 450 Sutter St., San Francisco, Secy.

American College of Chest Physicians, Atlantic City, June 3-7, 1959. Dr. Donald R. McKay, Buffalo, Pres.; Mr. Murray Kornfeld, 112 E. Chestnut, Chicago 11, Executive Secy.

American College of Obstetricians and Gynecologists. Dr. R. Glen Craig, San Francisco, Pres.; Dr. John C. Ullery, Ohio State University Hospital, Columbus, Secy.

American College of Physicians, Chicago, April 20-24, 1959. Dr. Dwight L. Wilbur, San Francisco, Pres.; Mr. E. R. Loveland, 4200 Pine, Philadelphia 4, Secy.

American College of Radiology, Chicago, Feb. 6-7, 1959. Dr. Vincent W. Archer, Charlottesville, Va., Pres.; Mr. W. C. Stronach, 20 N. Wacker Dr., Chicago 6, Executive Director.

American Congress of Physical Medicine and Rehabilitation. Dr. Donald L. Rose, Kansas City, Kan., Pres.; Dorothea C. Augustin, 30 N. Michigan Ave., Chicago, Executive Secretary.

American Dermatological Association, Atlantic City, June 1-4, 1959. Dr. J. Lamar Callaway, Durham, N. C., Pres.; Dr. Wiley M. Sams, 308 Ingraham Bldg., Miami, Secy.

American Gastro-Enterological Association. Dr. F. J. Ingelfinger, 65 E. Newton, Boston 18, Secy.

American Gynecological Society, Hot Springs, Va., May 25-27, 1959. Dr. Lewis C. Scheffey, Philadelphia, Pres.; Dr. A. A. Marchetti, 3800 Reservoir Rd. N.W., Washington 7, D. C., Secy.

American Hospital Association. Mr. Tol Terrell, San Angelo, Pres.; Dr. Edwin L. Crosby, 18 E. Division, Chicago 10, Executive Director.

American Laryngological, Rhinological, and Otological Society, Hot Springs, Va., March 10-12, 1959. Dr. G. D. Hoople, Syracuse, N. Y., Pres.; Dr. C. S. Nash, 708 Medical Arts Bldg., Rochester, N. Y., Secy.

American Neurological Association, Atlantic City, June 15-17, 1959. Dr. Bernard J. Alpers, Philadelphia, Pres.; Dr. Charles Rupp, 133 S. 36th, Philadelphia 4, Secy.

American Ophthalmological Society, Hot Springs, Va., May 28-30, 1959. Dr. Derrick Vail, Chicago, Pres.; Dr. M. C. Wheeler, 30 W. 59th, New York 19, Secy.

American Orthopedic Association. Dr. George O. Eaton, Baltimore, Pres.; Dr. Harold A. Sofield, 715 Lake St., Oak Park, Ill., Secy.

American Pediatric Society, Buck Hill Falls, Pa., May 6-8, 1959. Dr. Joseph Stokes, Jr., Philadelphia, Pres.; Dr. A. C. McGuinness, Room 1036, 2800 Quebec St., N.W., Washington 8, D. C., Secy.

American Proctologic Society, Atlantic City, June 15-18, 1959. Dr. Karl Zimmerman, Pittsburgh, Pres.; Dr. Norman D. Nigro, 10 Peterboro, Detroit 1, Secy.

American Psychiatric Association, Philadelphia, April 26-May 1, 1959. Dr. Francis J. Gerty, Chicago, Pres.; Dr. C. H. Hardin Branch, 156 Westminister Ave., Salt Lake City, Secy.

American Society of Clinical Pathologists, Chicago, Nov. 1-8, 1958. Dr. Harry P. Smith, New York, Pres.; Dr. Clyde G. Culbertson, 1040 W. Michigan, Indianapolis 7, Secy.

American Surgical Association, San Francisco, April 15-17, 1959. Dr. I. S. Ravdin, Philadelphia, Pres.; Dr. William Altemeier, Cincinnati General Hospital, Cincinnati 29, Secy.

American Urological Association, Atlantic City, April 20-23, 1959. Dr. Adolph Kutzmann, Los Angeles, Pres.; Dr. Samuel L. Raines, 188 S. Bellevue Blvd., Memphis, Tenn., Secy.

International College of Surgeons, U. S. Chapter. Dr. Curtice Rosser, Dallas, Pres.; Dr. Karl Meyer, 1516 Lake Shore Dr., Chicago, Secy.

National Tuberculosis Association, Chicago, May 24-29, 1959. Dr. Mario M. Fischer, New York, Pres.; Mrs. Wallace B. White, 1790 Broadway, New York 19, Secy.

Radiological Society of North America, Chicago, Nov. 16-21, 1958. Dr. Leo G. Rigler, Los Angeles, Pres.; Dr. Donald S. Childs, 713 E. Genesee, Syracuse 2, N. Y., Secy.

Southern Medical Association, New Orleans, Nov. 3-6, 1958. Dr. W. Kelly West, Oklahoma City, Pres.; Mr. V. O. Foster, 1020 Empire Bldg., Birmingham 3, Secy.

Southern Surgical Association, Boca Raton, Fla., Dec. 9-11, 1958. Dr. James D. Rives, New Orleans, Pres.; Dr. George G. Finney, 2947 St. Paul, Baltimore 18, Secy.

Southwest Allergy Forum, Houston, April 26-28, 1959. Dr. Richard L. Etter, Houston, Pres.; Dr. Richard H. Jackson, 156 Hermann Professional Building, Houston, Secy.

Southwestern Society of Nuclear Medicine, New Orleans, Spring, 1959. Dr. Herbert C. Allen, Jr., Houston, Pres.; Dr. J. R. Maxfield, Jr., 311 Medical Arts Bldg., Dallas, Secy.

Southwestern Surgical Congress, Denver, March 30-April 2, 1959. Dr. Louis M. Overton, Albuquerque, Pres.; Mary O'Leary, 813 Medical Arts Bldg., Oklahoma City, Exec. Secy.

United States-Mexico Border Public Health Association, Brownsville and Matamoros, Tamaulipas, Mexico, April, 1959. Albert O. Irigoyen, Mexico, D. F., Pres.; Dr. Jorge Román, 243 United States Court House, El Paso, Secy.

State

Private Clinics and Hospitals Association of Texas, Dallas, Dec. 14-15, 1958. Dr. Joe Shepperd, Burnet, Pres.; Mr. Henry E. Taylor, Medical Arts Building, Dallas, Executive Secy.

Texas Academy of Internal Medicine, Galveston, Dec. 6-7, 1958. Dr. A. W. Harris, Dallas, Pres.; Dr. Hugo T. Engelhardt, 1216 Main, Houston, Secy. Meetings restricted to members.

Texas Air-Medics Association, San Antonio, April, 1959. Dr. R. Henry Harrison, Bryan, Pres.; Dr. C. F. Miller, P. O. Box 1338, Waco, Secy.

Texas Association of Blood Banks, Austin, February, 1959. Dr. Louis J. Manhoff, Jr., San Antonio, Pres.; L. Ruth Guy, Ph.D., 725 Doctors Building, Temple.

Texas Association for Mental Health, Fort Worth, March 12-14, 1959. Dr. Frank Schooner, Fort Worth, Pres.; Mr. John Lane, 2410 San Antonio, Austin, Executive Director.

Texas Association of Obstetricians and Gynecologists, Fort Worth, Feb. 14, 1959. Dr. Jesson L. Stowe, El Paso, Pres.; Dr. Oran V. Prejean, 1317 N. Washington St., Dallas, Secy.

Texas Chapter, American Association of Public Health Physicians, San Antonio, April, 1959. Dr. David M. Cowgill, San Benito, Pres.; Dr. B. M. Primer, 2709 Rio Grande, Austin.

Texas Chapter, American College of Chest Physicians, San Antonio, April 19, 1959. Dr. J. O. Armstrong, Dallas, Pres.; Dr. Carlos J. Quintanilla,, Box 592, Harlingen, Secy.

Texas Club of Internists. Dr. D. D. Warren, Waco, Pres.; Dr. L. C. Carter, 2600 Procter, Port Arthur, Secy.

Texas Dermatological Society, San Antonio, April 20, 1959. Dr. Earl L. Loftis, Dallas, Pres.; Dr. E. N. Walsh, 1410 Pruitt St., Fort Worth 4, Secy.

Texas Diabetes Association, San Antonio, April 19, 1959. Dr. Merton Minter, San Antonio, Pres.; Dr. Warren W. Moorman, 901 W. Leuda, Fort Worth, Secy.

Texas Division, American Cancer Society, Austin, Dec. 4, 1958. Dr. J. Layton Cochran, San Antonio, Pres.; Mr. Curt W. Reimann, 5014 Bull Creek Rd., Austin 3, Executive Director.

Texas Geriatrics Society, San Antonio, April 20, 1959. Dr. Martin S. Buehler, Dallas, Pres.; Dr. J. A. Armstrong, 3810 Swiss Ave., Dallas, Secy.

Texas Heart Association, San Antonio, April 19, 1959. Dr. William B. Adamson, Abilene, Pres.; Ernest T. Guy, 404 Jesse H. Jones Library Bldg., Texas Medical Center, Houston 25, Executive Director.

Texas Hospital Association, Houston, May 11-14, 1959. Mr. W. P. Earngey, Jr., Fort Worth, Pres.; Mr. O. Ray Hurst, 2208 Main, Dallas, Executive Director.

Texas Industrial Medical Association, San Antonio, April 19, 1959. Dr. Wendell H. Hamrick, Houston, Pres.; Dr. Robert A. Wise, Box 2180, Houston, Secy.

Texas Neurophychiatric Association, San Antonio, April 19, 1959. Dr. Samuel R. Snodgrass, Galveston, Pres.; Dr. Clarence S. Hoekstra, 8215 Westchester Drive, Dallas, Secy.

Texas Ophthalmological Association, San Antonio, April 19, 1959. Dr. Harold Beasley, Fort Worth, Pres.; Dr. James Scruggs, 2223 Austin, Waco, Secy.

Texas Orthopedic Association, San Antonio, April 20, 1959. Dr. Louis J. Levy, Fort Worth, Pres.; Dr. Margaret Watkins, 3503 Fairmount, Dallas, Secy.

Texas Physical Medicine and Rehabilitation Society, San Antonio, April 19, 1959. Dr. Vann S. Taylor, Dallas, Pres.; Dr. Lewis A. Leavitt, Veterans Administration Hospital, Houston, Secy.

Texas Proctologic Society, New Orleans, February, 1959. Dr. C. P. Hardwicke, Austin, Pres.; Dr. H. Gray Carter, 915 St. Joseph St., Dallas, Secy.

Texas Public Health Association. Dr. D. R. Reilly, San Angelo, Pres.; Mr. Wayne Garrett, City Health Department, Fort Worth, Executive Secy.

Texas Radiological Society, Dallas, Jan. 30-31, 1959. Dr. R. F. Wertz, Amarillo, Pres.; Dr. J. E. Miller, 6407 Forest Lane, Dallas 30, Secy.

Texas Rheumatism Association, Galveston, Dec. 5, 1958. Dr. W. W. Bondurant, San Antonio, Pres.; Dr. J. Morris Horn, 3707 Gaston, Dallas, Secy.

Texas Society of Anesthesiologists, San Antonio, April 19, 1959. Dr. M. M. Rosenzweig, San Antonio, Pres.; Dr. M. T. Jenkins, Parkland Hospital, Dallas, Secy.

Texas Society of Athletic Team Physicians, San Antonio, April 18, 1959. Dr. Edward T. Smith, Houston, Pres.; Dr. Jack Brannon, 2715 Fannin, Houston, Secy.

Texas Society of Gastroenterologists and Proctologists, San Antonio, April 19, 1959. Dr. O. P. Griffin, 800 5th Avenue, Fort Worth, Pres.; Dr. A. C. Broders, Jr., Scott and White Clinic Hospital, Temple, Secy.

Texas Society of Ophthalmology and Otolaryngology, Houston, Dec. 5-6, 1958. Dr. Owen R. O'Neill, Paris, Pres.; Dr. Edwin G. Grafton, 4319 Oak Lawn, Dallas, Secy.

Texas Society of Pathologists, San Antonio, April 21, 1959. Dr. John H. Childers, Galveston, Pres.; Dr. Marvin H. Grossman, Box 57, Dallas, Secy.

Texas Society of Plastic Surgeons, San Antonio, April 18, 1959. Dr. Baron Hardy, Houston, Pres.; Dr. Raymond Brauer, 6615 Travis, Houston, Secy.

Texas Traumatic Surgical Society, San Antonio, April 19, 1959. Dr. G. V. Brindley, Temple, Pres.; Dr. W. E. Crump, 1300 Eighth, Wichita Falls, Secy.

Texas Tuberculosis Association, San Antonio, March 19-21, 1959. Dr. John W. Middleton, Galveston, Pres.; Miss Pansy Nichols, P. O. Box 6158, Austin 21, Executive Director.

Texas Urological Society, San Antonio, January, 1959. Dr. Charles Hooks, Galveston, Pres.; Dr. Charles Hulse, 636 Moore Building, San Antonio.

District

First District Society, Fort Stockton, February, 1959. Dr. H. D. Garrett, El Paso, Pres.; Dr. E. S. Crossett, 1501 Arizona St., El Paso, Secy.

Second District Society, Lamesa. Dr. J. Vernon McKay, Lamesa, Pres.; Dr. Noble L. Rumbo, Box D, O'Donnell, Secy.

Third District Society, Plainview, March, 1959. Dr. Robert H. Mitchell, Plainview, Pres.; Dr. H. Fred Johnson, 2308 W. Eighth, Amarillo, Secy.

Fifth and Sixth Districts Society, Dr. O. L. Riley, Corpus Christi, Pres.; Dr. Thelma Frank, 1314 16th St., Corpus Christi, Secy.

Seventh District Society. Dr. Robert N. Snider, Austin, Pres.; Dr. Richard Lucas, 502 W. 13, Austin, Secy.

Ninth District Society, Huntsville. Dr. Lyman C. Blair, Houston, Pres.; Dr. James H. Sammons, Highlands, Secy.

Tenth District Society, Beaumont, Nov. 11, 1958. Dr. B. F. Pace, Beaumont, Pres.; Dr. W. J. Poshataske, Silsbee, Secy.

Eleventh District Society, May, 1959. Dr. Ben Wilson, Tyler, Pres.; Dr. Phillip W. Taylor, 833 S. Beckham, Tyler, Secy.

Twelfth District Society. Dr. George C. Bryant, Waco, Pres.; Dr. J. T. Archer, Jr., Meridian, Secy.

Thirteenth District Society, Wichita Falls, 1959. Dr. W. R. Sibley, Abilene, Pres.; Dr. R. D. Moreton, 1217 W. Cannon, Fort Worth, Secy.

Fifteenth District Society. Dr. Charles Wise, Naples, Pres.; Dr. George Bennett, 402 S. Bolivar, Marshall, Secy.

Clinics

Blackford Memorial Cancer Lectures, Denison, Nov. 11, 1958. Dr. R. G. Gerard, 509 S. Mirick, Denison, Chm.

Dallas Southern Clinical Society, Dallas, March 23-25, 1959. Dr. C. D. Bussey, Dallas, Pres.; Millard J. Heath, 433 Medical Arts Bldg., Dallas 1, Executive Officer.

International Medical Assembly of Southwest Texas, San Antonio, Jan. 26-28, 1959. Dr. Lawrence B. Reppert, 817 South Texas Bldg., San Antonio, Secy; S. E. Cockrell, 202 W. French Place, San Antonio, Exec. Secy.

New Orleans Graduate Medical Assembly, New Orleans, March 2-5, 1959. Dr. Eugene H. Countiss, New Orleans, Pres.; Dr. Maurice E. St. Martin, 1430 Tulane Ave., New Orleans 12, Secy.

Postgraduate Medical Assembly of South Texas, Houston, July, 1959. Dr. Charles D. Reece, Pres.; Dr. C. Forrest Jorns, Secy., Exec. Office, 412 Jesse Jones Library Bldg., Houston 25.

Board Examinations

Texas State Board of Medical Examiners, Fort Worth, Dec. 4-6, 1958. Dr. M. H. Crabb, 1714 Medical Arts Bldg., Fort Worth, Secy.; Miss Luanna Knox, Assistant Secy.

MEDICOLEGAL NOTES

Death of Patient—Physician's Role

Is it necessary for a physician to examine and pronounce a patient dead before the body is removed by the funeral director from the hospital?

Legally, and answering the specific question above, a physician's presence is not required at the moment of death. However, later there are both legal and practical reasons which make his presence at death, or shortly thereafter, both desirable and advisable.

What about the cause of death?

Although the law may be silent as to the doctor's actual presence at death, it is not silent as to his certifying the cause of death. In addition to being necessary for the compilation of vital statistics, a death certificate is also prima facie evidence in all courts of the facts stated therein. As there are instances in which the sickness or accident involved does not account sufficiently for the death, certifying the cause of death is important, and the time to make certain the cause, if not definitely and previously established, is when the patient expires and prior to embalming.

Should an autopsy be performed?

Autopsies, of course, should be performed only with the proper consent, as is set out in our statutes, for scientific knowledge or curiosity is not sufficient to waive liability for an unauthorized autopsy. Where kindness and sympathy have been shown the deceased, the relatives are more amenable to giving consent for an autopsy though often they are reluctant to give such consent prior to death. Consequently, that leaves little time between actual expiration and contemplated removal of the body for this consent to be obtained. The physician's presence at this particular time is advisable and desirable if this consent is to be obtained. Because of the close relationship which has arisen between the physician, deceased, and relatives, often the physician's request for an autopsy, tactfully suggested, will be honored and consent given.

Of course, in many instances, consent is not necessary for the performance of an autopsy. Suppose a patient who had no physician is brought into the hospital and dies shortly after admission. In cases of this nature, the lack of medical history would make most physicians reluctant to certify as to the cause of death, and it would be proper for the physician to refuse to certify the cause of death. It then would be the duty of the justice of the peace or medical examiner to request an autopsy. This also would be true in cases where suspicious circumstances surrounded the death and an autopsy is necessary to determine whether or not there has been foul play.

What about disposition of the body or parts of the body for transplant, or to medical research?

Though the law is far from settled as to the rights of one to dispose of his body as he chooses and holds that the surviving spouse or next of kin has a quasiproperty right in the body of the deceased (which was originally designed to fix responsibility for burial), yet the courts usually will uphold the requests of the deceased as to disposition of his body, in the absence of objection on the part of the relatives. Naturally, if an objection is raised, it would be the safer course legally to honor the objections of the relatives even though the deceased had made certain requests as to disposition of his body or parts thereof. There are certain types of transplants which should be done immediately. If the attending physician is not present at death and has failed to make the wishes of the deceased known to others involved in such transplants, it may well result in this opportunity for the advancement of medicine being lost forever.

Does it take too much time to examine and pronounce a person dead?

Public policy and a due regard for the public health, as well as the universal sense of propriety, require that dead bodies of human beings be decently cared for and disposed of at the earliest moment consistent with the exigencies of the case and due regard for the religious convictions of the deceased and his family. Physicians are familiar with the various tests for death handed down through the centuries. There was the "onion" test, the "mirror" test, and as late as 1907 the "bubbles" test, which the author felt was simpler and more reliable than the mirror test. However, medical science has progressed beyond the use of these tests, and physicians find it neither a painstaking nor a time-consuming procedure to pronounce a person dead.

Will better relations be engendered by the physician's presence at death?

The close relationship enjoyed today between physician and patient has not been an automatic one—it has come about through years of diligent efforts by the members of the medical profession. Although it is true a physician is limited as to what he can do at the time a death occurs, the value of his presence to comfort and alleviate the sorrow of the family can not be underestimated. Perhaps the public has come to expect his presence, for compassion has always been one of the outstanding characteristics of physicians. Being available at this particular time can not harm but certainly can help to continue this excellent tradition of the medical profession.

—PHILIP R. OVERTON, LL.B., Austin.

Unethical Collecting Agents Take Advantage of Physicians

Several Texas physicians recently have turned over unpaid accounts to collection agencies with the understanding that they would keep a certain low percentage of all accounts which they collected only to find out later that they had not read the fine print or understood hidden clauses.

A pediatrician in central Texas signed such a contract under the impression that the company was due only 30

per cent of what it collected and of what the physician collected on the accounts referred to the company. This physician collected approximately $140 by himself and sent the company its 30 per cent. The company collected nearly $500 from 31 accounts, but so far he has not received the 70 per cent which he thought the company agreed to pay him.

Apparently, he had not taken time to read the clause in the middle of the contract which specifies that for every account turned over to the company, there is a minimum of $3 charged so that the physician became obligated for that amount when he signed the contract. When the doctor turned over 175 accounts, the company expected to keep all the money collected until it had exceeded $525 and then start sending the physician his share under the agreement. Since the contract is a legal document, there is nothing this doctor can do except wait and hope.

Another example of a questionable collection agency was cited in the August 18 issue of *Medical Economics* in the article "Don't Get Hooked by These Petty Racketeers!" written by Edwin N. Perrin.

A Texas internist generally employed a local collection agency which split the proceeds fifty-fifty. Then one day a man who said he represented a big collection agency on the West Coast told him that his company could afford to offer the best rates in business—charging only 30 per cent on collections—because of its special techniques and of the volume of business which his company did. The doctor signed the contract and then read the fine print which stated that the agency's cut was 30 per cent of the total amount of each account on which it collected any payment at all. If only $1 was paid on a $53 account, the agency would get $15.90 for collecting the money. In addition, there was a minimum charge of $3 per account whether or not any collection was made. The internist had turned over 140 accounts to the agency so the entire first $420 collected went to pay these minimum charges. There was nothing for the physician to do but cancel the contract and accept his losses.

Physicians can spot a dubious agency by its low rates, according to *Medical Economics*. Most efficient companies can not survive on a charge of less than 40 or 50 per cent of money collected. A typical charge would be 50 per cent on accounts of less than $25, and 40 per cent on larger ones, Mr. Perrin reports. Agencies which charge less are almost certain to be cutting corners, he says.

Second, the physician should be wary of written contracts. Most reputable agencies do not need to use them, said Mr. Perrin.

Third, the dependable collection agency is usually a local concern, he says. Before turning any accounts over to an out-of-state firm, physicians will do well to check with the Better Business Bureau of its home city.

Medical Legislation Brought Up in Congress

More than a dozen bills of medical interest were passed during the second session of the Eighty-Fifth Congress, which recently adjourned. Just as important, however, were two bills that did not pass, the Washington staff of the American Medical Association comments.

Although the Forand bill, a hospitalization and surgical case program under social security, failed to clear the House Ways and Means Committee, the committee did order study to be made of the problem of financing medical care of the aged with emphasis on use of social security. Since the report is due by February 1, 1959, it is likely to come before the new Congress. The Jenkins-Keogh bill, concerning tax deferment on annuities for the self employed, was left hanging. Because it went through the House with an overwhelming vote, it is probable, however, that it will be enacted next year.

Other medical bills considered by the legislative groups include:

1. *Medicare Program.*—The civilian phase of the Medicare program was curtailed and new restrictions in effect this fall are aimed at higher utilization of military facilities.

2. *Social Security Amendments.*—It is likely that the next Congress will consider bills using the social security system to provide hospital and medical care for OASDI beneficiaries since a report will be made next February on the various possibilities for financing medical care for the aged.

3. *Chemical Additives in Food.*—A bill prohibiting the use of chemical additives in food until their pretesting has been approved by the Food and Drug Administration was passed on the last day.

4. *Medical School Construction Aid.*—Bills to authorize one time grants for new and existing medical schools to build classrooms were pending in both House and Senate at adjournment.

5. *Doctor Draft Extension.*—Under this act passed in the first session, selective service has authority until July 1, 1959, to call certain physicians up to age 35 for military service. Although the military has been getting enough doctors through new graduates and volunteers, it expects to ask for another extension next year.

Congress Cuts Medicare Costs

The civilian Medicare program is struggling through an uncomfortable period of readjustment while attempting to cut its costs by about 30 per cent, the Washington Office of the American Medical Association reports.

Had the program continued the way it was operating last year, the cost this year would be an estimated $100,000,000. Instead, the Defense Department, on the urging of Congress, is attempting to keep the costs within the appropriated $70,200,000.

The major restrictions, as outlined by the department at a meeting of Medicare contractor representatives in Washington on August 8, follow:

Dependents living with their sponsors are to use military facilities, unless the military authorities certify that civilian care is necessary because service facilities are not available. Dependents not living with sponsors will have freedom of choice of military or civilian medicine, as now.

In maternity cases, if the patients are living apart from sponsors, they will continue to have freedom of choice. If living with sponsors, new patients or those in the first trimester must use service facilities if available. Those in the second and third trimester, if under civilian care October 1, may continue, but if for any reason they change doctors, military facilities must be used if available.

The new regulations also discontinue all services "not clearly specified in the law" for all dependents. The eliminated services include medical care ordinarily rendered on an outpatient basis, acute emotional disorders, and elective surgery. Emergency care may be obtained from civilian sources without prior authorization.

Where more than one service facility is located in the area, a military clearinghouse will screen dependents and hospitals to insure that all service hospitals are used "to the optimum."

EDUCATION

Postgraduate Courses

Endoscopy and Carcinoma of the Breast, San Antonio, September 20—A course in practical endoscopy and management of carcinoma of the breast is being presented by the San Antonio Division of the University of Texas Postgraduate School of Medicine.

The University of Oklahoma Medical Center, Oklahoma City, October.—An Oregon-Oklahoma Combined Specialty Meeting for Practicing Physicians will be held October 3-4 at the University of Oklahoma Medical Center. Complimentary registration is granted physicians in military service, interns, and residents. Tickets to the Oregon-Oklahoma football game at Norman, Okla., may be obtained from the Athletic Ticket Office, Norman, by sending $4 plus 25 cents mailing charge. A course in pediatric diagnostic problems will also be offered by the center on October 8. For further information, physicians may write the Office of Postgraduate Education, University of Oklahoma Medical Center, 801 N. E. 13th Street, Oklahoma City 4.

The University of Tennessee Medical Units, Memphis, October.—The University of Tennessee Medical Units is offering a course in clinical electrocardiography October 8-10 and a course in obstetrics and gynecology October 15-17. Additional information may be obtained from Wallace Mayton, Director of the Postgraduate Department, University of Tennessee, 62 S. Dunlap Street, Memphis 3.

Ear, Nose and Throat, Dallas, October 3 and 4.—The University of Texas Southwestern Medical School in Dallas will offer a course in ear, nose, and throat. Those interested may write the University of Texas Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 19.

Dermatology and Syphilology, New York, October 6-10.—An intensive review course on dermatology and syphilology for pediatricians will be given at the New York University-Bellevue Medical Center Postgraduate Medical School. It will include clinical sessions and demonstrations of patients together with the application of modern diagnostic and therapeutic modalities. Also, illustrations of common and rare skin diseases will be featured along with illustrated lectures covering differential diagnosis, causes, and newest forms of treatment. Tuition is $85.

Electrocardiology, Houston, October 7-December 9.—A postgraduate course in electrocardiology will be presented by the University of Texas Postgraduate School of Medicine in the conference room of St. Joseph's Hospital, Houston. Additional information may be received from the Office of the Dean, University of Texas Postgraduate School of Medicine, Texas Medical Center, Houston 25.

Pediatrics, Oklahoma City, October 8.—A course on pediatric diagnostic problems will be given by the University of Oklahoma Medical Center in Oklahoma City.

Cardiology, El Paso, October 11.—The University Postgraduate School of Medicine will hold a course in cardiology on October 11 at the Turner Home in El Paso. It is a practical course which will cover in a general manner selected topics. Physicians who desire more information may write the school, Texas Medical Center, Houston 25.

Cardiopulmonary Physiology, Chicago, October 13-17.—The Council on Postgraduate Medical Education of the American College of Chest Physicians will present a course on clinical cardiopulmonary physiology at the Edgewater Beach Hotel in Chicago, October 13-17. Tuition is $100. Further information may be obtained by writing to the executive director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11.

Internal Medicine, Durham, N. C., October 13-17.—Duke University Medical Center will offer a course on the physiological basis of internal medicine under the direction of Dr. Eugene A. Stead, Jr. Further information may be obtained by writing E. R. Loveland, Executive Secretary, American College of Physicians, 4200 Pine Street, Philadelphia 4.

Obstetrics, New York, October 16-30.—The Women's Hospital in New York is offering two courses in obstetrics—"Antepartum Care" and "Conduct of Labor and Delivery"—October 16-30. These are full time courses running for a week each. Students will be expected to work in clinics, and in the second course will be assigned to patients in labor whom they will assist in delivery. Either one or both courses may be elected. Application blanks and further information may be received by writing Carl P. Wright, Jr., Woman's Hospital, 141 West 109 Street, New York 25.

Medical Problems of the Elderly, Houston, October 23-25.—The University of Texas M. D. Anderson Hospital and Tumor Institute will offer a course on medical problems of the elderly October 23-25 in Houston. It will cover comprehensively such medical problems as nutrition; endocrine, cardiovascular, musculoskeletal, pulmonary, and genito-urinary conditions; skin; dentures; hearing; and mental health. For additional information, physicians may write the hospital, Texas Medical Center, Houston 25.

Orthopedic Surgery, Dallas, October 30-November 1.—A postgraduate course in orthopedic surgery will be presented by the University of Texas Southwestern Medical School in Dallas. Physicians who wish further information may write the University of Texas Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 19.

Air Force Residencies Announced

Approved residencies in general practice are available at the United States Air Force Hospitals. The residency program includes 1 year of training in medicine, including pediatrics and psychiatry; and 1 year in surgery, including traumatic surgery, fractures, and obstetrics, and gynecology. Physicians interested may write the Surgeon General, Headquarters, United States Air Force, Washington 25.

Grant Given Southwestern Professor

The Orthopaedic Research and Education Foundation, Chicago, has announced a grant to Dr. Charles F. Gregory, associate professor of orthopedic surgery, at the University of Texas Southwestern Medical School, Dallas, on "Immune Response and Inductor Capacity of Homologous Fetal Bone Transplants."

Fellowship Offered for Cancer Research

Applications are now open for the William and Lola Heuermann Cancer Research Fellowship at the University of Texas M. D. Anderson Hospital and Tumor Institute in Houston. Graduates of class A medical schools who have completed an internship and at least 3 years of residency training in surgery are eligible.

Tenure of the fellowship is 1 year and may be extended for 1 or 2 additional years. The annual stipend will be $7,000 for the first year and $7,500 for the second year of the fellowship.

Committee Reports Austin Good Medical School Site

Austin offers a favorable location for a third medical branch of the University of Texas in the opinion of a survey team made up of representatives from the Association of American Medical Colleges and American Medical Association who recently inspected Austin for this purpose.

The following points were found in favor of Austin: (1) The presence of the University of Texas so that there could be a close parent-university relationship. (2) The possibility of developing a working affiliation with the community-owned Brackenridge Hospital, which is accredited and the financial support of which is assured by the city. (3) The presence of two excellent libraries in the city; those of the University of Texas and Texas Medical Association.

An objection which was found to this location is the fact that there is a relatively small indigent population from which to draw for clinical teaching. Also, the differential in salaries between the faculty of a school of medicine and that of other branches of the university when the two are located in the same community often leads to some complaining on the part of the latter.

There are four general hospitals in Austin which offer potential for clinical teaching. They are Brackenridge, Seton, St. David's and Holy Cross Hospitals. Of these, Brackenridge, the city-county hospital, offers the most promise for teaching. It has an out-patient clinic to which 36,000 visits were made in the past year, and an emergency service which accommodated approximately 10,000 private patients and 12,000 indigent patients during this same period. It is used now for undergraduate training in obstetrics by students from the University of Texas Medical Branch in Galveston.

In addition, there is a city-county tuberculosis hospital and numerous specialized institutions, such as the Cerebral Palsy Center and Oak Ridge Sanitarium (psychiatry), as well as many state agencies and organizations, such as the Texas State Department of Health and Texas Medical Association.

A similar survey was made in San Antonio in October, 1957.

Medical Students Given Scholarships

Wayne M. Meyers, Ph.D., a fourth year student at Baylor University College of Medicine, Houston, and Milton A. Cardwell, a second year student at Southwestern Medical School of the University of Texas, in Dallas, have been awarded $500 scholarships for research and clinical training in the field of allergic diseases by the Allergy Foundation of America.

Medical Examiners Give Award

Dr. Herman Lapin, graduate of Baylor University College of Medicine, Houston, was awarded a certificate from the Texas State Board of Medical Examiners for having the highest grade average, 93.8, of those taking examinations to practice medicine in June. This was the first such certificate to be awarded.

Licenses were issued to 328 persons by the board after its executive session August 16 in Fort Worth. There were 66 licenses issued by reciprocity, 9 full failures, and 17 failures in the junior and first half examinations.

The board has refused several physicians a license because they had been guilty of practicing medicine without a license. They thought they did not have to have a license as long as they were practicing under a licensed physician, as a preceptor, or as an assistant or under fellowship or tutorship.

The board warns all members of the Texas Medical Association to communicate with the secretary's office before taking on any assistant to practice medicine in order to determine whether or not this person is eligible to obtain a license. A licensed physician violates the medical practice act by permitting an unlicensed person to use his license to practice medicine.

Test Series Set by Board of Medical Examiners

The Texas State Board of Medical Examiners will give examinations and consider applications for licenses by reciprocity at its meeting December 4-6 at Fort Worth. Applications for reciprocity must be complete and on file at least 30 days prior to the December meeting date; applications for examinations must be complete and on file at least 10 days before the meeting date.

Residencies in Psychiatry Offered

Residencies in psychiatry are being offered by Timberlawn Sanitarium in affiliation with the Department of Psychiatry at the University of Texas Southwestern Medical School and Parkland Hospital, Dallas. Only graduates of United States medical schools are eligible and 2 years' general practice is preferred.

The training program provides broad experience in intensive psychotherapy, group therapy, physiological and pharmacological therapies, social and preventive psychiatry, and behavioral sciences. It provides for resident participation in teaching and research.

Texas Nursing Students May Receive Aid

Texas Christian University, Fort Worth, and the University of Texas School of Nursing, Galveston, are among the 32 colleges and universities through which the Sealantic Fund is making available scholarship grants for nursing students. Candidates for baccalaureate degrees in nursing may receive scholarship assistance ranging from $4,000 to $24,000.

A total of $1,473,800 has been made available for aid in the fields of education for nursing and utilization of nursing services by the philanthropic corporation. A special gift from John D. Rockefeller, Jr., is making the grants possible. Those interested may write the Sealantic Fund, 50 West 50th Street, New York 20.

Women's Association Offers Fellowship

The women's Medical Association of the City of New York offers the Mary Putnam Jacobi Fellowship to a graduate woman physician, either American or foreign. It will start October 1, 1959, and will amount to $2,000. Deadline for application is February 1, 1959. Those interested may write Dr. Ada Chree Reid, 118 Riverside Drive, New York 24.

University of Texas Medical Branch

Dr. Kenneth W. Earle, associate professor of pathology at the University of Texas Medical Branch in Galveston, and *Dr. Stephen R. Lewis,* assistant professor of plastic surgery, have been named assistant deans of medicine at the University of Texas Medical Branch in Galveston. Dr. Earle will be in charge of the undergraduate student program and Dr. Lewis will be responsible for the graduate program for interns, residents, and practicing physicians.

Dr. Don W. Micks is taking a year's leave of absence from his duties as professor of entomology at the medical branch and as entomologist for the Galveston County Mosquito Control District for a post with the World Health Organization in Geneva, Switzerland.

Dr. Clemens A. Struve of the medical branch hospitals has been awarded a $1,800 fellowship by the Ophthalmology Scholarship Fund of the Guild of Prescription Opticians of America, Inc. Dr. Struve will receive monthly stipends over his 3 year period of residency training.

Dr. William P. Wilson, formerly on the Veterans Administration staff in Durham, N. C., has been appointed as director of psychiatric research at the University of Texas Medical Branch in Galveston.

Several faculty members served as guest speakers at the University of Puebla's First Congress of Medicine and Surgery held July 13-19. They were Drs. G. W. N. Eggers, Jr., Fred Wolma, George S. McReynolds, Fred Guilford, and George R. Herrmann.

At the first Congress of Medicine and Surgery in Mexico City recently, staff members participated in a program on atherosclerosis. Those taking part included Dr. Fred Wolma, Dr. G. W. N. Eggers, Jr., Dr. J. Mathews Robison, Dr. George S. McReynolds, Dr. George R. Herrmann, and Dr. Fred Guilford. Dr. Herrmann was presented with the keys of the city and the original charter.

This fall, Dr. Herrmann plans to attend the World Congress of Cardiology in Brussels, Belgium, where he will present a paper on the Medical Branch's extensive study of paroxysmal atrial tachycardia in patients with organic heart disease. Then he will go to Basel, Switzerland, for a seminar with the pharmacologists of Sandoz Laboratories. He also will inspect United States Army hospitals in Europe.

Dr. Marc Garza, who is in his third year of residency in the study of pathology at the Medical Branch, has received a $3,600 fellowship from the Galveston County chapter of the American Cancer Society.

Dr. Frank Connally of Waco has been appointed assistant executive director of the University of Texas Medical Branch in Galveston, to assume duties at the beginning of the 1958 fall term. He will assist in the Department of Obstetrics and Gynecology.

Dr. D. Bailey Calvin, formerly serving in the capacity of dean of students and curricular affairs, has become director of the Office of Research Grants and Contracts.

Donald A. Dreyer, Ph.D., of the department of microbiology at the medical branch, begins work in September on a search for a method of curbing amoebic dysentery. Dr. Dreyer's work is being made possible through a grant by the Jeanne B. Kempner Foundation.

Dr. Logan Wilson, president of the University of Texas, has disclosed plans for a long-range building program for the University of Texas Medical Branch at Galveston which will include an expenditure of $15,000,000 within the next 17 years if approved by the Legislature. He expressed the hope that construction and expansion of medical school and hospital buildings might begin within 5 years.

DRUG NOTES

Vaginal Tablets, Antihistamines, Antibiotics Among Recent Drugs

LYCINATE VAGINAL (Lloyd) is available in tablets containing diiodohydroxyquin 100 mg., sodium lauryl sulfate 5 mg., dioctylsodiumsulfosuccinate 5 mg., aluminum potassium sulfate 14 mg., lactose 380 mg., and dextrose 650 mg. Lycinate is suggested in the treatment of leukorrhea, 1 or 2 vaginal tablets being inserted deep into the vagina night and morning.

Diiodohydroxyquin U.S.P. is widely known as Diodoquin (Searle) and is closely related to the iodochlorhydroxquinoline Vioform (Ciba).

Sodium lauryl sulfate is a surface active agent and also an anionic detergent. Duponol C (Dupont) is a mixture of sodium alkyl sulfates consisting chiefly of sodium lauryl sulfate. (Dreft is similar.)

Dioctylsodiumsulfosuccinate is Aerosol OT (American Cyanamide), another anionic surface active agent and a powerful wetting agent. Dioctylsodiumsulfosuccinate is the active ingredient present in Colace (Mead) and Doxinate (Lloyd), the stool softeners. This surface active agent is also present in many instrument sterilizing solutions and solutions for topical application to enhance the bactericidal properties of antiseptics.

The potassium alum, of course, is an astringent while the lactose and dextrose promote normal flora.

Baculin (Amfre) is a preparation similar to Lycinate.

ACTIDIL (Burroughs Wellcome) is a brand of triprolidine hydrochloride, an antihistamine.

This new antihistamine is said to be unusually potent. The adult dose is 2.5 mg., two or three times a day. Children over 2 years of age may be given ½ tablet two or three times a day, and infants ¼ tablet. A syrup is also available: half-strength, 1.25 mg. in 5 cc.

The toxicity is said to be remarkably low since the median lethal dose is many hundred times that of the therapeutic dose. Although the drug is relatively free of side effects, excessive dosage may produce drowsiness.

The onset of action is considered rapid with the maximum effect in about 3½ hours and protecting through about 12 hours.

Actidil is useful in treating hay fever, rhinitis, pruritus, allergies, and other conditions where an antihistamine is indicated.

Triprolidine is trans-1-(4-methylphenyl)-1-(2-pyridyl)-3-pyrrolidino-prop-1-ene hydrochloride. A close relative is Pyronil (Lilly), which is slower acting. Undoubtedly, halogenated derivatives of triprolidine have been or will be prepared and may appear in the future; however, such halogenation may increase toxicity as well as potency.

POLARAMINE (Schering) is used for the prevention and treatment of all allergic conditions responsive to oral antihistamines, for example, hay fever, angioedema, drug reactions, food allergies, allergic eczema, insect bites, migraine headache, vasomotor rhinitis, and urticaria.

The drug is supplied in tablets of 2 mg. to be given three or four times a day and as a Repetab of 6 mg., 3 mg. of which, the outer layer, gives prompt action while the inner core is released in 4 to 6 hours. The Repetab dose is usually 1 twice daily, morning and evening. A third Repetab may be added in refractory cases.

Polaramine is said to have the highest potency, the lowest dosage, and the greatest safety among antihistamines while having freedom from side effects.

The therapeutic index is a measure of the safety of a drug and is a ratio of minimum lethal dose to the thera-

peutic dose; therefore, the higher the number, the safer the drug, when comparing similar drugs under identical conditions. The therapeutic indices of some leading antihistamines are presented:

Polaramine (Schering)	3,380
Dimetane (Robins)	1,930
Benadryl (Parke-Davis)	70
Pyribenzamine (Ciba)	60

Actually, Polaramine is not new in itself. It can be thought of as purified Chlor-Trimeton (Schering). Chlor-Trimeton is the dl form or a racemic mixture. Separation of racemic mixtures into their component d and l forms often isolates a great percentage of the activity to one form or the other. This then can give as much as a 50 per cent increase in activity over the unresolved dl mixture. A similar history has taken place in the development of the amphetamines, for example, Benzedrine (Smith, Kline & French) is racemic, and Dexedrine (Smith, Kline & French) is dextrorotatory.

Although the trade name Polaramine is a logical choice, since the detection of optical rotation is accomplished by means of a polarimeter, dextro-chlor-trimeton would have been a more informative name, especially to those having been in medical practice several years and having a background of information upon which to build. Furthermore, additional confusion is added by using totally different generic names. Chlor-Trimeton carries the generic name chlorprophenpyridamine maleate and Polaramine the generic name dextrochlorpheniramine maleate. Chlorpheniramine seems more suitable since this is the official pharmacopeial name.

KANTREX (Bristol) is a new antibiotic effective against a wide variety of recalcitrant organisms. Among the susceptible organisms are Micrococcus pyogenes var. aureus (Staphylococcus aureus), Staphylococcus albus, Proteus, Aerobacter aerogenes, Klebsiella pneumoniae, Salmonella, Shigella, Escherichia coli (E. coli), Pseudomonas, and enterococcus. Clinical studies have shown that many organisms resistant to chloromphenicol (Chloromycetin-Parke Davis), streptomycin, erythromycin (Ilotycin-Lilly; Erythrocin-Abbott), chlortetracycline (Aureomycin-Lederle), tetracycline (Achromycin-Lederle), oxytetracycline (Terramycin-Pfizer), oleandomycin (Matromycin-Pfizer), and novobiocin (Albamycin-Upjohn; Cathomycin-Merck Sharp & Dohme) are susceptible to Kantrex.

Kantrex is a brand of kanamycin sulfate obtained from the organism Streptomyces kanamyceticus and is indicated in various respiratory and urinary tract infections and in certain soft tissue infections.

The average intramuscular adult dose is 1 to 2 Gm. in divided doses. Children may be given 15 to 30 mg. per kilogram of body weight in divided doses.

The aqueous solution is stable at room temperature and is supplied in vials of 1 Gm. contained in 3 ml. or .5 Gm. contained in 2 ml. of solutions. Half-gram capsules are also available for the preoperative antisepsis of the bowel. This latter action is due to poor intestinal absorption.

Signs of eighth nerve dysfunction were observed during clinical trials but seemed to be of less toxic potential than streptomycin.

Cross-resistance with other major antibiotics has not been demonstrated.

This is the antibiotic which arrested an epidemic of infant infections in a Houston hospital last March, after 16 babies had died.

Kantrex (kanamycin) appears to be a true and major advance in antibiotic therapy, having a sensitivity for "stubborn" organisms, which has been sorely needed. It is hoped that other dose forms will be available soon.

SPENSIN PS (Ives-Cameron) is an adsorbent-demulcent containing dihydrostreptomycin, polymyxin-B sulfate, pectin, and activated attapulgite in alumina gel. This preparation is indicated in the symptomatic treatment of diarrhea. The adult dose is 1 tablespoonful three or four times a day before meals. The preparation apparently is supplied only in 4 ounce containers.

Attapulgite is a clay superior to kaolin in adsorptive powers according to a recent series of articles in the *Journal of the American Pharmaceutical Association*. Wyeth was the first to appear with attapulgite. Polymagma (Wyeth) contains claysorb (attapulgite).

—HERBERT SCHWARTZ, M.S., Austin.

MEDICAL MEETINGS

Texas Pediatric Society to Austin

The Texas Pediatric Society will meet October 18 and 19 at the Terrace Motel in Austin. All doctors are invited to attend; advance fees and registration are not necessary.

Topics to be discussed include "Primary Tuberculosis," "Open Heart Surgery," "Management of Mentally Retarded Child," "Anaphylactoid Purpura," "Nephritis and Nephrosis," "Growth Failure," "Recurring Abdominal Pain," "Office Management of Behavior Disturbances," "Diagnostic Problems, Kodachrome Clinic," and "Common Problems in Pediatric Practice."

Speakers for the meeting will include Dr. Ralph Platou, New Orleans; Dr. Dan McNamara, Houston; Dr. Harry Bakwin, New York; Dr. Theo Panos, Galveston; Dr. James Baty, Brookline, Mass.; and Dr. John James. A cocktail party and dinner dance will be held October 18. Those interested may write Dr. James N. Walker, secretary, 5216 W. Freeway, Fort Worth.

Texas Surgical Society to Meet

The Texas Surgical Society meets October 5-7 at the Galvez Hotel in Galveston. The meeting is open to members of the society and their invited guests. A reception will be held October 5, and a dinner with Judge Bob Casey of Houston as speaker, October 6, for members and their wives and guests.

Among the subjects to be presented include "Bilateral Lobular Carcinoma in Situ of the Breast," "Carcinoma of the Larger Bile Ducts Exclusive of the Papilla of Vater"; "Repair of Diaphragmatic Hernia at the Esophageal Hiatus by the Abdominal Approach"; "Acute Duodenal Fistula"; "Intramural Hematoma of the Duodenum"; "Changing Concepts in the Treatment of Cancer of the Breast"; "The Surgical Survey, Part II"; "The Prevention of Wound Infection Following Surgery of the Colon"; and "Rectal Involvement of Carcinoma of the Prostate."

Also will be discussed "Diverticula of the Small Bowel Not Including Those of the Duodenum or Meckel's"; "Management of Precancerous and Cancerous Lesions of the Lip"; "Urological Complications of Gout"; "Results of Major Artery Grafting"; "Surgical Resection of the Rectosigmoid Colon for Recurrent Diverticulitis"; "Treatment of Non-Union Long Bone with Refrigerated Homograft"; "The Nature of Pain Associated with Malignant Neoplasm"; "Five and Six Year Survival Following Pan-

creaticodenectomy for Carcinoma of the Ampulla of Vater"; and "Surgical Treatment of Thoracic Esophageal Diverticula."

Those participating are Dr. J. Peyton Barnes, Houston; Dr. R. J. White, Fort Worth; Dr. Adolph Kauffmann, Fort Worth; Dr. C. B. Morton, University of Virginia, Charlottesville, Va.; Dr. Thomas M. Oliver, Waco; Dr. Edward B. Rowe, Galveston; Dr. T. H. Thomason, Fort Worth; Dr. Robert L. Sewell, Fort Worth; Dr. A. O. Singleton, Galveston; Dr. John Case, San Antonio; Dr. John Overstreet, Houston; Dr. L. L. D. Tuttle, Houston; Dr. Stephen Lewis, Galveston; Dr. Howard Dudgeon, Waco; Dr. Jesse E. Thompson, Dallas; Dr. Dale J. Austin, Dallas; Dr. Edward T. Smith, Houston; and Dr. F. C. Rehfeldt, Fort Worth.

Hypnosis Meeting to Be Held

The Society for Clinical and Experimental Hypnosis, an international scientific society, will present a scientific program at the Morrison Hotel in Chicago, October 29-31. The society is comprised of physicians, dentists, and psychologists engaged in the clinical use of hypnosis.

The program will include breakfast seminars, round-table luncheons, panel discussions, and formal presentations. Immediately preceding the meeting, the Institute for Research in Hypnosis of the Long Island University Postgraduate School will present its annual workshop in clinical hypnosis, October 27-29.

Registration will be limited. For a copy of the program and more detail information, physicians may write to the administrative secretary, Society for Clinical and Experimental Hypnosis, 750 N. Michigan, Chicago 11.

Harold Crasilneck, Ph.D., Southwestern Medical School of the University of Texas, Dallas, is a member of the program committee.

10,000 Expected at Surgeons Meeting

More than 10,000 are expected to attend the annual clinical congress of the American College of Surgeons, October 6-10 in Chicago at the Conrad Hilton Hotel.

Postgraduate courses, research forums, panel discussions, closed circuit operation telecasts, medical motion pictures, cine clinics, and exhibits will make up the program. Major addresses will be made by Dr. Newell W. Philpott, Montreal, incoming president; Dr. George J. Curry, Flint, Mich., authority on care of the injured; and Dr. Gunnar Thorsen, Stockholm, Sweden, distinguished surgeon and writer in the field of essential body fluids.

More than 1,100 initiates will be presented for fellowship in the college, honorary fellowships conferred, and officers inaugurated. Continuing the medical student education program launched by the college's board of regents 2 years ago, 37 medical students will attend as guests of the college. For additional information, doctors may write the American College of Surgeons, 40 East Erie Street, Chicago 11.

Urologists to Meet in Dallas

The South Central Section of the American Urological Association will meet in Dallas, October 12-15 at the Baker Hotel. Dr. John M. Pace, Medical Arts Building, Dallas, can give further information.

Nutrition, Aging Conferences Set

More than 500 physicians, nurses, and dieticians will gather October 16 in Madison, Wis., for the fifth annual symposium sponsored by the American Medical Association's Council on Foods and Nutrition.

"Factors Involved in Formation and Disease of Bone" will be the subject under discussion at the 1 day meeting to be held at the University of Wisconsin. A highlight of the program will be a presentation by Willard Libby, Ph.D., of the Atomic Energy Commission, on atomic fallout and radioactive strontium utilization in the human bone. Further information may be secured from the Council on Foods and Nutrition at AMA headquarters, 535 N. Dearborn, Chicago 10.

To coordinate medicine's activities in the field of aging, the American Medical Association called a special planning conference September 13-14 in Chicago. The AMA Committee on Aging invited state medical societies and state departments of public health to send representatives.

Medical College Association to Meet

The sixty-ninth annual meeting of the Association of American Medical Colleges will be held October 13-15 at the Sheraton Hotel in Philadelphia.

Included on the program will be a panel on "Medical Education and the University," a summary of the first Institute on Clinical Teaching, and a talk by the president of the American Medical Association entitled, "AMA and the Medical School Partnership." For additional information, physicians may write to the association headquarters, 2530 Ridge Avenue, Evanston, Ill.

Surgeons Sponsor World Tour

Physicians will leave San Francisco October 10 for the fourth Around-the-World Postgraduate Clinic and Lecture Tour sponsored by the International College of Surgeons; they will return to New York on December 3.

Sections of the college in Hawaii, Japan, Hong Kong, the Philippines, Thailand, India, Egypt, Turkey, Greece, Italy, and Spain will be hosts to the visiting surgeons at their clinics and hospitals. Further information may be had by writing to Dr. Arnold S. Jackson, 16 South Henry Street, Madison 3, Wis.

Medical Assistants to Have Meeting

The second annual convention of the American Association of Medical Assistants will be held October 31-November 2 at the Palmer House in Chicago. All medical assistants are invited to attend.

Registration fee is $18, which includes a tour of the American Medical Association building, a dinner, brunch, and a cocktail party and banquet. Business, medical, and technical subjects will be discussed.

The organization, which was established in 1955, is made up of 6,000 representatives from 17 states. The association is now offering its members a comprehensive insurance program. This is a salary replacement (sickness and accident) plan with optional major hospital, nurse expense, and surgical benefits.

Inquiries may be addressed to Miss Hallie Cummins, Medical Record Library, Caro State Hospital for Epileptics, Caro, Mich.

Houston Cancer Conference Scheduled

The University of Texas M. D. Anderson Hospital and Tumor Institute will present the third annual clinical conference on cancer chemotherapy for Texas physicians November 14-15 at the Texas Medical Center in Houston.

Guest speakers will include Dr. Michael B. Shimkin, Bethesda, Md.; Dr. Sidney Farber, Boston; and Dr. Warren H. Cole, Chicago. Also, members of the staff of M. D. Anderson Hospital and Tumor Institute will participate in the program.

Registration will be held between 8:30 and 9 a. m. on November 14. Physicians may preregister by writing for a registration blank from the hospital at the Texas Medical Center, Houston 25. Members of the Academy of General Practice desiring credit for attendance at this conference must register in advance with the University of Texas Postgraduate School of Medicine, Jesse Jones Library Building, Houston; $5 is required for registration for the Academy. Eight hours will be certified for attendance.

Gastroenterologists to Meet in October

The twenty-third annual convention of the American College of Gastroenterology will be held at the Jung Hotel in New Orleans, October 20-22. Silver certificates are to be presented to those who have been affiliated with the organization for 25 years.

Panels will be presented on gastric carcinoma, steroids in gastroenterology, and functional disturbances of the gastrointestinal tract. As part of this year's session, a regional meeting will be held October 27 at the University Hospital in Mexico, D. F.

Immediately following the convention, October 23-25, a postgraduate course in gastroenterology will be held. Dr. Owen H. Wangensteen of Minneapolis and Dr. I. Snapper of Brooklyn will be moderators. Attendance at the course will be limited to those who register in advance.

Copies of the program and further information concerning the meeting and postgraduate course may be obtained by writing the American College of Gastroenterology, 33 West 60th Street, New York 23.

Music Therapy Is Conference Topic

The ninth annual conference of the National Association of Music Therapy will be held October 30-November 1 at the Netherland-Hilton Hotel in Cincinnati. Registration is $6 for members and $3 for students.

Medical Journal Conference in Austin

A Regional State Medical Journal Conference, to which representatives of county medical society journals of Texas as well as the state journals from throughout the Southeast and Southwest are invited, will be held in Austin, October 18-19. The *Texas State Journal of Medicine* will be host.

James M. Liston, Chicago, editor of *Today's Health;* Jack Woodside, Cleveland, director of Production at Fuller & Smith & Ross, Inc. (publications counselor for Eli Lilly and Company); Bernice M. Moore, Ph.D., Austin, assistant to the director, Community Programs and Professional Education, Hogg Foundation for Mental Health, and consultant, Home and Family Life Education, Texas Education Agency; and DeWitt C. Reddick, Ph.D., Austin, professor and acting director, School of Journalism, and associate dean, College of Arts and Sciences, University of Texas, will be featured speakers and discussion leaders. Additional leaders from Texas and elsewhere have accepted program responsibilities.

Doctors Invited to Industrial Conference

Physicians, nurses, and management people are invited to attend the eleventh annual Health Conference for Business and Industry, October 9 and 10 at the Rice Hotel in Houston. The Texas Industrial Medical Association will hold its fall meeting in connection with the conference.

Among those addressing the conference will be Dr. F. J. L. Blasingame, executive vice president of the American Medical Association, Chicago, who will speak on "What Lies Ahead?"; Dr. J. F. McCahan, New York, "Practical Details of Setting Up, Staffing, and Operating Medical and Consultative Services for the Small Plant"; Earl D. Schubert, Ph.D., acting director of the Cleveland Hearing and Speech Center, Cleveland, Ohio, "Hearing Conservation in Industry"; and Dr. Logan T. Robertson, Asheville, N. C., "Statistical Uses of Medical and Safety Records."

Panels will be presented entitled, "Utilizing Our Available Resources" and "Problems in Radiation Protection." Registration fee is $6.

Societies on Aging to Merge

Merger of the Texas Geriatrics Society (organized in 1954 and open to physicians) and the Texas Gerontological Society (organized in 1956 and open to both professional and lay persons interested in aging) will be completed in connection with the annual meeting of the Texas Gerontological Society in Austin, November 14-15. The new society, Texas Society on Aging, will have five divisions: clinical medicine, biological sciences, psychological and social sciences, social work, and administration.

Dr. Martin S. Buehler, Dallas, is president of the Texas Geriatrics Society; Herbert Shore, also of Dallas, of the Texas Gerontological Society.

Rhinologic Society to Convene

The American Rhinologic Society will hold its fourth annual meeting in the Palmer House, Chicago, October 17-18.

Among the subjects to be discussed will be pulmonary and nasal physiology, laboratory and clinical aspects of bone transplants, hump removal, roof repair, and nasal process corrections. There will be no registration fee. For further information, physicians may write Dr. Robert M. Hansen, 1735 North Wheeler Avenue, Portland 17.

Air Pollution Conference Planned

The National Conference on Air Pollution, sponsored by the Department of Health, Education, and Welfare Public Health Service, Washington, will be held November 18-20 at the Sheraton-Park Hotel in Washington. Those interested may write the Department of Health, Education, and Welfare, Washington 25, D.C.

Oklahoma Conference Is October 27

The Oklahoma City Clinical Society will hold a fall clinical conference, October 27-29 in Oklahoma City.

Speakers for the program will be Dr. C. Knight Aldrich, Chicago, psychiatrist; Dr. James Barron, Detroit, surgeon; Dr. Blair E. Batson, Jackson, Miss., pediatrician; Dr. Parker R. Beamer, Indianapolis, pathologist; Dr. Louis A. Brunsting, Rochester, Minn., dermatologist; Dr. Edwin J. DeCosta, Chicago, obstetrician; Dr. E. Grey Dimond, Kansas City, internist; Dr. Harold Gifford, Omaha, ophthalmologist; Dr. Claude N. Lambert, Chicago, orthopedist; Dr. Isadore Meschan, Winston-Salem, N. C., radiologist; Dr. Clarence Thorpe Ray, Columbia, Mo., internist; Dr. John T. Reynolds, Chicago, surgeon; Dr. Russell B. Roth, Erie, Penn., urologist; Dr. John M. Sheldon, Ann Arbor, allergist; and Dr. John A. Wall, Houston, gynecologist.

Those desiring additional information may write the Oklahoma City Clinical Society, 503 Medical Arts Building, Oklahoma City.

Cancer Symposium Set in New York

A symposium on "Carcinoma of the Colon and Rectum" will be presented at the annual scientific session of the American Cancer Society to be held October 20-21 at the Biltmore Hotel in New York. In addition to the presentation of papers, speakers will participate in a panel discussion as a part of each session. All sessions are opened to doctors and medical students.

Subjects to be discussed include "Pathogenesis and Etiology of Cancer of the Colon and Rectum," "Diagnosis of Cancer of the Colon and Rectum," "Meeting the Problem of Spread of Cancer of the Colon and Rectum," and "Treatment of Cancer of the Colon and Rectum." Inquiries concerning the program may be addressed to the Director of Professional Education, American Cancer Society, Inc., 521 West 57th Street, New York 19.

Texas Surgeons to Confer in Nassau

Several Texas physicians will participate in the first Bahamas Surgical Conference to be held at the British Colonial Hotel in Nassau, Bahamas, December 29-January 27. They are Drs. Bertha N. Davis-Clark, R. Lee Clark, Jr., Vernon J. Kinross-Wright, and William O. Russell, Houston, and Dr. R. H. Rigdon, Galveston.

Those interested may obtain information by writing Dr. B. L. Frank, 23 E. 79th Street, New York 21; special rates are available by writing directly to the manager of the hotel.

Space Flight Topic of Conference

European experts on problems of space flight will be on the program of the Symposium on the Physics and Medicine of the Atmosphere and Space to be held November 10-12 at the Hilton Hotel in San Antonio. It is sponsored by the United States Air Force School of Aviation Medicine and conducted by the Southwest Research Institute of San Antonio.

Speakers who have accepted include Marcel Nicolet, Meterological Institute of Belgium, Brussels; Walter Dieminger, head of the Max Planck Institute for Ionosphere Research, Lindau, Germany; Jacob Eugter, University of Zurich, Switzerland; L. R. Shepherd, president, British Interplanetary Society, London; Gerard de Vaucouleurs, Astrophysical Institute, Paris; and Alberto Hurtado, director, Institute of Andean Biology, Lima, Peru.

Public Health Progress to Be Reported

Reports on progress being made by voluntary and governmental agencies toward solving the major health problems facing mankind will be featured at the American Public Health Association's eighty-sixth annual meeting October 27-31 in St. Louis.

More than 4,000 health authorities from the Americas and other parts of the world are expected to attend. Also more than 40 related organizations have scheduled sessions during the same week. Subjects to be included on the program are dental health, engineering and sanitation, epidemiology, food and nutrition, health officers, mental health, occupational health, and public health education.

Information is available at the American Public Health Association, 1790 Broadway, New York.

Psychosomatic Medicine Meeting Set

The fifth annual meeting of the Academy of Psychosomatic Medicine will be held October 9-11 at the Park Sheraton Hotel in New York. The program will be devoted to the psychosomatic aspects of internal medicine and will include formal papers, panel discussions, and luncheon conferences. Those interested may write Dr. Bertram B. Moss, Suite 1035, 55 East Washington, Chicago 2.

Legal Institute Scheduled

An Institute on Personal Injury Litigation will be presented by the Southwestern Legal Center in Dallas on October 29-31.

OF GENERAL INTEREST

Second Shannon Lectureship Arranged

The second annual Shannon Lectureship in Medicine will be given October 18 in San Angelo. It is being sponsored by the Electrocardiographic Committee of the Shannon West Texas Memorial Hospital, San Angelo.

Lecturers will be Drs. Jerome W. Conn of Ann Arbor, and George W. Thorn of Boston. Dr. Conn will speak on "Primary Aldosteronism: Diagnosis, Management, Pathology, and Prognosis," "The Prediabetic State: Definition and Implications," and "Often Misunderstood Aspects of Obesity." Dr. Thorn's topics are "The Diagnosis of Altered States of Adrenal Function," "Adrenal-Ovarian Relationships," and "Considerations Relating to Nonspecific Use of Cortisone and ACTH."

A luncheon, cocktails, and dinner are included in the program. There will be no registration fee.

The lectureship is scheduled one day prior to the District 4 Medical Society meeting, also in San Angelo.

Personals

Dr. Robert J. Rowe, Dallas, has been appointed to the editorial board of the new medical journal, *Diseases of the Colon and Rectum,* sponsored by the American Proctologic Society.

Dr. Cyril J. Ruilmann, director of Mental Health and Hospitals of the Board for Texas State Hospitals and Special Schools, has been elected chairman of the Southern Regional Council on Mental Health Training and Research for 1958-1959.

Dr. John J. Andujar, Fort Worth, presented a paper at the second Congress of Latin-American Pathologists in Sao Paulo, Brazil, September 9, on investigations of cancer of the uterus.

Drs. Eugene P. Schoch, Austin; *A. G. Schoch,* Dallas; and *Lee J. Alexander,* Dallas, were awarded the certificate of merit—first place award—in the dermatology awards division for their exhibit on "Pruritus" at the American Medical Association convention.

The father of *Dr. J. F. Finsterwald* of San Antonio, who was Dr. Charles F. Finsterwald of New York, died July 28 in Naples, Fla.

Dr. Lee D. Cady, manager, Veterans Administration Hospital, Houston, was awarded a certificate of honorary membership July 20 by the Association for Physical and Mental Rehabilitation for distinguished service in the field of physical and mental rehabilitation.

Dr. William M. Crawford of Fort Worth was received into the Harveian Society of London, made up chiefly of noted British physicians and surgeons, August 11 in London.

Dr. Carleton B. Chapman, head of the cardiopulmonary laboratories at Parkland Memorial Hospital in Dallas, participated in a recent meeting of the American Society for Clinical Investigation, reporting a method of measuring blood volume using bi-plane cinefluorographic equipment.

Dr. Jeanne Fairweather of Houston has been awarded a fellowship grant by the American Cancer Society.

Dr. Francis C. Usher, associate professor of clinical surgery at the Baylor University College of Medicine at Houston will present an exhibit on a new surgical mesh at the meeting of the American College of Surgeons in Chicago on October 6-10. The mesh, which is made of high density polyethylene, has been used successfully in the repair of tissue defects of the chest and abdominal wall.

Dr. and Mrs. Hyman P. Roosth are the parents of a girl, Cathy Lynn, born recently at Corpus Christi.

Miss Barbara Darnall, daughter of *Dr. and Mrs. Charles M. Darnall* of Austin, was married to Daniel Darius Clinton, Jr. of Houston on September 6.

Dr. and Mrs. R. A. Neblett of Canyon have announced the engagement of their daughter, Dorothy Elizabeth, to Clay Kemper Perkins of Austin. The couple are being married September 20 in Canyon.

Dr. Joseph W. Goldzieher, research professor at Trinity University and chairman of the department of endocrinology of the Southwest Foundation for Research and Education, spoke to the Argyle club at its July meeting in San Antonio. Dr. Goldzieher spoke on "What and Why of Basic Research."

Dr. Garth L. Jarvis of the University of Texas Medical Branch at Galveston and *Dr. Harry M. Spence* of Dallas will be among the guest speakers on the program of the annual fall clinical conference of the Kansas City Southwest Clinical Society which is being held September 22-25 in Kansas City, Mo.

Dr. Samuel R. Snodgrass of Galveston has been elected secretary-treasurer of the American Academy of Neurological Surgery.

Dr. and Mrs. Harry W. Slade, Waco, are mourning the loss of six relatives in the crash of the Dutch airliner in the Atlantic Ocean in August. Mrs. Slade's mother and father, an aunt, a first cousin, and a great aunt and uncle, who had gone to the Netherlands to celebrate the 100th anniversary of their church, were aboard the plane.

Dr. John A. Wall, clinical associate professor of gynecology at Baylor University College of Medicine, Houston, will be among the guest lecturers at the twenty-eighth annual fall conference of the Oklahoma City Clinical Society October 27-29.

Dr. Herman L. Gardner, Houston, was presented an award from the Royal Belgian Society of Gynecology and Obstetrics for his outstanding work in gynecology. The presentation was made during the International Exposition in Brussels. Dr. Gardner had received earlier recognition for his work in 1945 by the Central Association of Obstetrics and Gynecology of the United States.

Dr. Oscar L. Morphis, assistant clinical professor of radiology at Southwestern Medical School in Dallas, will participate in the fifth annual meeting of the Academy of Psychosomatic Medicine which will be held October 9-11 in New York at the Park Sheraton Hotel. Theme for the meeting will be "The Psychosomatic Aspects of Internal Medicine."

Many Physicians Admit Not Learning of New Drugs

The difficulty physicians have in keeping abreast of medical progress is emphasized in an article by William R. Wood in the June 30 issue of the *Wall Street Journal.* As the article tells its readers, "There's progress all right, but it won't do you much good if your doctor doesn't keep up with it."

Giving several examples of cases in which a patient failed to receive the best recent treatment, apparently because his physician had been unable to keep up with the flood of information about new products and new techniques, the article says, "Few doctors will admit to specific cases where they might have treated a patient more effectively if they had been able to keep up with their homework. But they will concede it does happen to others."

Reasons for the difficulty doctors encounter in trying to keep up to date are enumerated: The country's ethical laboratories turn out approximately 400 new drugs a year—better than one a day—and employ something like 20,000 salesmen, many of whom call on the doctors with literature and samples. Also competing for the doctors' time are 6,000 medical journals and hundreds of bulletins, reports, and meetings of societies and associations where new techniques are described.

"It used to be that an advance in some field of medicine would stand unchanged for 5 years," Dr. G. S. Duboff at the University of Michigan is quoted as pointing out, "but now a development is lucky to last a year before it's overturned by something newer and better."

Although many physicians consider themselves too busy to read the literature they receive, the newspaper mentions several interviewees as stating that they deliberately set aside time each day to read, even though it means seeing fewer patients. One physician is cited as figuring he loses roughly $2,000 a year in fees because he spends 2 hours a day reading medical news. Another physician, a member of a clinic group of five doctors, reports that the influx of technical literature became so heavy about a year ago that one member of his group has been assigned to read the office mail and report each week to his colleagues on

anything of significance that has come in. This arrangement, the doctor reports, costs his office as much as $50 a week in time the researcher otherwise could spend seeing patients, but "we can't afford to let the good ones go by" without reading them, he says.

At the other extreme, a young physician is reported as throwing out "everything that comes second class." He complains, "If I kept it, I'd fill my office to the ceiling in a week."

TB Topics: Tuberculin Tests

WHY?

Skin testing excludes tuberculosis when it *must be suspected in differential diagnosis* or justifies more intensive study if the reaction is positive. Skin testing also identifies the infected—or germ carrying—individual or group who must be supervised and kept under medical observation if the disease is ever to be controlled. The skin test identifies all the infected group; roentgen-ray identifies only those with structural changes in the lungs, which usually come at a much later stage.

The magnitude of the tuberculosis control problem can be realized only if we remember that approximately 30 of every 100 adults in America are now carrying germs that can—and may—produce active disease. Recent studies also indicate that dormant infections of earlier life often become contagious in advanced age.

WHEN?

Tuberculosis skin testing should be done in all general office, clinic, or hospital examinations, in routine pediatric practice, in diagnostic surveys wherever the total tuberculosis problem is being considered, and in all preemployment, preschool and marriage examinations.

Syphilis is routinely tested for and it is found in only about 1 in 1,000 tests. Why not a routine test for tuberculosis, which would yield about 300 per 1,000?

HOW?

Among the tests used and recommended are the Vollmer patch test and the Mantoux (intradermal) test using a purified protein derivative (PPD) or old tuberculin (O. T.).

The Vollmer patch test is a little less efficient than the intradermal test but when positive is equally reliable. For most purposes the intradermal method is preferred.*

In diagnostic work PPD first strength of .1 cc. on O. T. in 1/10,000 dilution is used. Severe reactions are quite rare with these dosages. Negative reactors to first dose should have a second test using PPD No. 2 or O. T. 1/1,000.

Persons with history of previous positive reaction need not be retested. Negative reactors should have their tests repeated at suitable intervals depending on exposure and other factors favoring infection.

Tests are read from 48 to 72 hours after injection. "Response is classified on basis of *induration* as positive, negative, or doubtful. Induration is noted by gentle palpation and stroking with the fingers and not by inspection alone"† [emphasis added].

The technique for preparing the material and for giving the test is simple and easily carried out, but for reliable results, must conform strictly to instructions.

—Committee on Tuberculosis,
Texas Medical Association.

*Waegele, V. C.; Rothrock, W. J.; and Scoyoc, R. V.: Simultaneous Mantoux and Vollmer Patch Tests in 855 School Children, Dis. Chest, 31:634-642 (June) 1957.

†Diagnostic Standards, N. T. A., revised 1955 ed., p. 42, (distributed free on request by all local tuberculosis associations).

Texas Department of Health Investigates X-Ray Equipment

The Texas State Department of Health now is able to give more extensive service to physicians who work with x-ray equipment, as well as their nurses, assistants, and receptionists, according to Ralph Griffin, Jr., of the Division of Occupational Health of the State Department of Health.

For several years, the State Department of Health upon request has made examinations of x-ray facilities both in industry and in the doctor's office and made recommendations for eliminating the possibility of hazards to persons working with the machinery. Now, the department is expanding its service with the hope of local health department representatives eventually making routine investigations for all physicians owning roentgen-ray equipment, says Mr. Griffin.

In investigations, health department workers check to see if the primary beam of the machinery is sufficient to penetrate the walls of a room in which the physician or his assistants sit at a desk each day, reports Mr. Griffin. They also measure the rays and recommend how far from the machine the operator should stand to get medium radiation. They tell physicians where the maximum danger points are and how to protect themselves. Then later they submit a written report to doctors, he says.

Some of the suggestions which representatives make to help prevent occupational hazards include: (1) To install portable shields to protect operators against secondary x-rays or special filters to cut out soft primary rays. (2) To decrease the operating peak time in order to produce less exposure. (3) To point x-ray tube in the proper direction. (4) To require that a film badge be used to be sure physicians and patients do not exceed the recommended milliroentgens of exposure. (5) To use metal cones over the tube of the machine to help aim the beams in the proper direction.

Any physician who would like to have his x-ray equipment investigated may check with the Division of Occupational Health of the Texas State Department of Health, 410 East Fifth, Austin, or his local health department.

Poison Control Centers Increase

The number of poison control centers in Texas is increasing. Recent booklets relating to such centers—one on their locations in the state, another on toxicology information, and the third on first aid measures—issued by the Division of Occupational Health of the Texas State Department of Health list Austin, Corpus Christi, Fort Worth, Galveston, and Houston as having centers. Information also may be obtained from the division. Physicians interested in the booklets may receive copies upon request.

Physicians and wives of physicians attending meetings at the Texas Medical Association headquarters September 4-7 were reminded of the need for poison control centers by an exhibit displayed courtesy of the Austin Poison Control Group, an exhibit previously shown at the Texas Medical Association annual session in April.

Gonzales Foundation Campaigns

A statewide emergency campaign and long range fund raising plan are now being undertaken by the Texas Rehabilitation Center, Gonzales Warm Springs Foundation.

Faced with an immediate $100,000 deficit, the board of directors voted July 27 to continue the hospital's operation for 3 months until it could be determined whether Texans would support the $2,500,000 hospital as they did when it was overflowing with poliomyelitis patients. An additional $450,000 must be raised to meet budget needs.

First response to the emergency campaign has been heartening, foundation officials say, but it will be the end of September before all funds are in. A number of state and local organizations have taken an interest ih the drive.

The Texas Rehabilitation Center, a nonprofit, nonsectarian institution accredited by the Joint Commission on Accreditation of Hospitals, has 110 beds with a normal patient load of about 75 plus an outpatient department. A staff of almost 250 employees including doctors of medicine, physical therapists, occupational therapists, a speech therapist, and a clinical psychologist aims at retraining the handicapped patient—child or adult—to live and work to the best of his ability. A medical advisory council representative of all parts of the state and about 50 physician consultants assist the staff. No patient is accepted without referral from a physician, but any physician may make such a referral.

Through the success of the Salk vaccine the center has been called on to treat fewer patients with poliomyelitis recently and the load consists mainly of persons with spinal cord injuries, hemiplegia, arthritis, multiple sclerosis, muscular dystrophy, cerebral palsy, and other musculoskeletal and neuroskeletal diseases and injuries. Outside funds for patient care are available only from the National Foundation for Infantile Paralysis and a limited hospital care program carried on by the state.

Chest Physicians Announce Fellows

The following physicians recently were awarded certificates of fellowship in the American College of Chest Physicians: Dr. Manley B. Cohen, El Paso; Dr. Robert B. Dickerson, Fort Sam Houston; Dr. Lloyd J. Gregory, Jr., Houston; Dr. Gerald S. Livengood, Mission; Dr. Henry W. Poetter, Temple; Dr. Edward P. Smith, Jr., San Antonio; Dr. Robert B. Stonehill, San Antonio; and Dr. Russell H. Wilson, McKinney.

Knee Injuries Less a Problem For Athletes and Coaches

Progressive resistive exercise has helped solve the problem of knee injury which has been of major concern for the player, trainer, and coach for more than 20 years, according to Karl K. Klein, assistant professor of physical education at the University of Texas, Austin. His comments appeared in an article in the February, 1958, *Journal* of the National Athletic Trainers Association.

"Surgical procedures have developed to the point that it is an exception to the rule that future competition is considered harmful for the player," reports Mr. Klein. "Once successful surgery has been completed, the major problem of reconditioning is the issue of importance and determines the degree and amount of successful competition in which the player will participate," he said.

Various forms of progressive resistive exercise are increased gradually and steadily to strengthen the muscular groups that support the entire knee structure with basic consideration being given not only to the quadriceps but also to the hamstrings as well as the gastroc, points out Mr. Klein. During the first 10 days to 2 weeks, some strength loss will be recovered through exercise. Early ambulation will gradually restore some of the loss, but far from the maximum protection needed for competition. It is at this point that the use of acceptable exercise systems are needed to restore preinjury function and beyond for added protection.

"It is necessary that systematic progressive exercise scheduling be established for a period of 6 to 8 weeks following the first seven to ten day period," says Mr. Klein. "According to therapeutic application studies of post knee injury cases, the rebuilding to a high level of muscular balance and protection can be gained in this period of time."

After the total reconditioning of an athlete, there is no reason why he should not be able to return to competitive sports with the same security as the person who has not been injured, and his chances of recurrent injury will probably be lessened because of the additional muscular strength and protection that has been developed from the planned progressive resistive exercise.

The athlete with known weak ligaments is by far more susceptible to knee injury, because the continuity of action between the tibi-femur will have an abnormal range of motion that is more difficult to control by muscular action, according to Mr. Klein. This person's only security after the operative procedures to remove the cartilage rests in the adequate carrying out of the progressive resistive exercise program and the development of "specific habit patterns" of action in the practice or game situation. A "habit pattern" of never relaxing while play is in progress and of reaction at the time of applied laterial force to the knee will add to the total protection.

Doctors Offered Advice On Human Relations

The doctor's major concern is that he and his patient often do not understand each other, according to Dr. Ernest Dichter, New York motivation researcher, who offered advice to physicians attending the forum on the social and economic problems now facing medicine, sponsored by the Medical Council of the Washington Metropolitan Area and the William S. Merrell Company, Cincinnati, last spring in Washington.

Dr. Dichter said that the following steps would produce more mature doctors and patients: relax and learn to accept your material aspirations as well as your ideals; recognize the patient's right to information about his diagnosis and treatment; establish a continuous relationship with the patient by reminding him of the need for regular examinations to safeguard his good health; meet the fee question honestly; and recognize and live up to your role as a community leader and public figure.

Cancer Research at VA Hospital

Research evidence that could point the way toward development of a vaccine for treatment of some types of cancer has been uncovered by the Veterans Administration hospital doctors at McKinney.

The work has been based on findings by James W. Finney, research microbiologist, which indicate that, under certain circumstances, products from cancer cells may cause the body to produce substances which may travel through the blood stream and attack the cancer cells.

OAK RIDGE SANITARIUM

FOR NERVOUS AND MENTAL DISEASES

- **All modern forms of individualized treatment for psychoses, psychoneuroses, personality disorders, alcoholism and drug addiction.**
- **Diagnostic procedures including electroencephalography.**
- **Separate air-conditioned buildings especially designed for custodial patients requiring psychiatric and medical care.**

Albert D. Pattillo, M. D.
Clinical Director

David Wade, M. D.
Medical Director

T. H. Wade
Administrator

Z. Kirkpatrick, R. N.
Supervisor Clinical Nursing

Helen D. McDonald
Assistant Administrator

3200 South First Street • Austin, Texas • Phone GR 8-8494 or HI 2-2121

Palvite will produce Vitamin B-12 serum levels superior to those obtained with injections of 100 mcg. B-12. Increased use of oral B-12 therapy was seen as a possible result of studies reported at the third Vitamin B-12 symposium, held in New York City recently. Investigators told of increased absorption of the orally administered vitamin in the presence of intrinsic factor if it was given in a vehicle containing sorbitol. Palvite utilizes sorbitol as the vehicle.

Each Teaspoonful Contains

Vitamin A	5000 Units
Vitamin D	1000 Units
Thiamin Hydrochloride	10 Mg.
Riboflavin (B-2)	1 Mg.
Niacinamide	20 Mg.
Ascorbic Acid (C)	75 Mg.
Vitamin B-6	1 Mg.
l-Lysine	60 Mg.
Vitamin B-12	25 Mcg.
in d Sorbitol	

Palvite is available at all drug stores in eight ounce amber bottles, usually under $4.50 to your patients.

ETHICAL PHARMACEUTICAL CO.

The Achievements of Arist

...in Skin Diseases: In a study of 26 patients with severe dermatoses, ARISTOCORT was proved to have potent anti-inflammatory and antipruritic properties, even at a dosage only ⅔ that of prednisone[1]... Striking affinity for skin and tremendous potency in controlling skin disease, including 50 cases of psoriasis, of which over 60% were reported as *markedly improved*[2]...absence of serious side effects specifically noted.[1,2,3]

...in Rheumatoid Arthritis: Impressive therapeutic effect in most cases of a group of 89 patients[4]... 6 mg. of ARISTOCORT corresponded in effect to 10 mg. of prednisone daily (in addition, gastric ulcer which developed during prednisone therapy in 2 cases disappeared during ARISTOCORT therapy).[5]

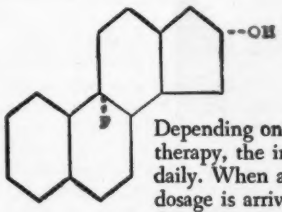
1. Rein, C. R., Fleischmajer, R., and Rosenthal, A. L.: J. A. M. A. *165*:1821, (Dec 7) 1957.
2. Shelley, W. B., and Pillsbury, D. M.: Personal Communication.
3. Sherwood, A., and Cooke, R. A.: Personal Communication.
4. Freyberg, R. H., Berntsen, C. A., and Hellman, L.: Paper presented at International Congress on Rheumatic Diseases, Toronto, June 25, 1957.
5. Hartung, E. F.: Personal Communication.
6. Schwartz, E.: Personal Communication.
7. Sherwood, A., and Cooke, R. A.: J. Allergy 28:97, 1957.
8. Hellman, L., Zumoff, B., Kretshmer, N., and Kramer, B.: Paper presented at Nephrosis Conference, Bethesda, Md., Oct. 26, 1957.
9. Ibid.: Personal Communication.
10. Barach, A. L.: Personal Communication.
11. Segal, M. S.: Personal Communication.
12. Cooke, R. A.: Personal Communication.
13. Dubois, E. L.: Personal Communication.

ocort®

Triamcinolone LEDERLE

...in Respiratory Allergies: "Good to excellent" results in 29 of 30 patients with chronic intractable bronchial asthma at an average daily dosage of only 7 mg.[6]... Average dosage of 6 mg. daily to control asthma and 2 to 6 mg. to control allergic rhinitis in a group of 42 patients, with an actual reduction of blood pressure in 12 of these.[7]

...in Other Conditions: Two failures, 4 partial remissions and 8 cases with complete disappearance of abnormal chemical findings lead to characterization of ARISTOCORT as possibly the most desirable steroid to date in treatment of the nephrotic syndrome.[8,9]... Prompt decrease in the cyanosis and dyspnea of pulmonary emphysema and fibrosis, with marked improvement in patients refractory to prednisone.[10,11,12]... Favorable response reported for 25 of 28 cases of disseminated lupus erythematosus.[13]



Depending on the acuteness and severity of the disease under therapy, the initial dosage of ARISTOCORT is usually from 8 to 20 mg. daily. When acute manifestations have subsided, maintenance dosage is arrived at gradually, usually by reducing the total daily dosage 2 mg. every 3 days until the smallest dosage has been reached which will suppress symptoms.

Comparative studies of patients changed to ARISTOCORT from prednisone indicate a dosage of ARISTOCORT lower by about ⅓ in rheumatoid arthritis, by ⅓ in allergic rhinitis and bronchial asthma, and by ⅓ to ½ in inflammatory and allergic skin diseases. With ARISTOCORT, no precautions are necessary in regard to dietary restriction of sodium or supplementation with potassium.

ARISTOCORT is available in 2 mg. scored tablets (pink), bottles of 30; and 4 mg. scored tablets (white), bottles of 30 and 100.

Lederle LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

TIMBERLAWN SANITARIUM

for

Nervous and Mental Diseases

Dallas 1, Texas

(Established June 23rd, 1917)

Davis-1-2678 **P. O. Box 1769**

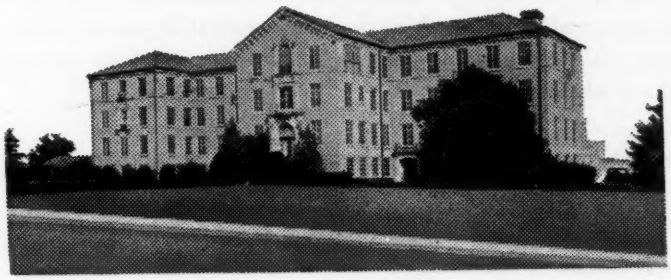
Complete modern facilities for Insulin-shock, Electro-shock therapy, and Chemotherapy, under constant medical supervision. Psychotherapy. Occupational therapy. All other accepted methods of psychiatric treatment.

NARCOTIC CASES NOT ADMITTED

THE STAFF

Perry C. Talkington, M.D., Clinical Director
Charles L. Bloss, M.D., Medical Director
Howard M. Burkett, M.D., Associate Psychiatrist
James K. Peden, M.D., Associate Psychiatrist
Ward G. Dixon, M.D., Associate Psychiatrist
Jerry M. Lewis, M.D., Associate Psychiatrist
C. L. Jackson, M.D., Associate Psychiatrist
LeeOwen S. Buford, M.D., Associate Psychiatrist
Albert F. Riedel, Jr., M.D., Resident Psychiatrist
Belvin A. Simmons, M.D., Resident Psychiatrist
E. Clay Griffith, M.D., Resident Psychiatrist

Frances Lumpkin, R.N., B.S., Director of Nurses
Donald Bertoch, M.S., Clinical Psychologist
Charles J. Black, M.A., Clinical Psychologist
Bill M. Turnage, M.S., Director of Social Service
Lois Timmins, Ed.D., Director of Recreational Therapy
Geraldine Skinner, B.S., O.T.R., Director of Occupational Therapy
Ralph M. Barnette, Jr., Business Manager



WICHITA FALLS CLINIC-HOSPITAL

STAFF

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Charles H. Wilson, M.D., F.A.C.S.
ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
ORAL SURGERY
R. A. Mitchell, D.D.S.
E. E. Stewart, D.D.S.
UROLOGY
Owen C. Berg, M.D., F.A.C.S.
LABORATORIES
Claude D. Wilson, M.D., D.A.B.R., Radiology
Joe D. Steed, M.D., D.A.B.R., Radiology
OTOLARYNGOLOGY
O. P. Moffitt, Jr., M.D.
RADIOACTIVE ISOTOPES
Claude D. Wilson, M.D., D.A.B.R.
Joe D. Steed, M.D., D.A.B.R.
Julian H. Acker, M.D.

MEDICINE
P. K. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
I. L. Humphrey, Jr., M.D., Diagnosis & Internal Medicine
W. B. Whiting, M.D., F.A.C.P., Cardiology
R. F. Knox, M.D., Endocrinology
Julian H. Acker, M.D., Diagnosis & Internal Medicine
Blair P. Coleman, M.D., Diagnosis & Internal Medicine
Preston McCall, M.D., Diagnosis & Internal Medicine
OPHTHALMOLOGY
Alton Munro, M.D.
PEDIATRICS
R. L. Nelson, M.D., F.A.A.P.
George W. Slaughter III, M.D., F.A.A.P.
OBSTETRICS AND GYNECOLOGY
W. L. Parker, M.D., F.A.C.S.
Warren T. Kable, M.D.
Frank J. Lee, M.D.
ADMINISTRATIVE OFFICER
Bertha McNeill, Administrator

Articles by Texas Physicians

Texas physicians have written the following articles which have been published and are available at the Memorial Library of the Texas Medical Association. A portion of the list was printed in the August issue of the *Journal*.

Hardy, Baron S.: *Treatment of Tissue Necrosis Following Intravenous Use of Norepinephrine,* Plast. & Reconstruct. Surg. 20:360-365 (Nov.) 1957.

Harris, Herbert H.: *Fixation of Fractures in the Middle Third of the Face with Kirschner Wires,* Laryngoscope 68:95-108 (Feb.) 1958.

Harris, J. Wade: *The Future of Proctology as a Specialty,* South. M. J. 51:514-516 (April) 1958.

Harrison, R. H.; Harrison, R. H., III; Harper, C. E.; and Lyone, C. R.: *Athletic Contact Injuries,* Clin. Med. 5:787-790 (June) 1958.

Hayden, William de Graffenried, and Hightower, Nicholas C., Jr.: *Primary Adenocarcinoma of the Ampulla of Vater,* South. M. J. 51:730-738 (June) 1958.

Hsi-Chih Chao, Dora: *The Over-All Management of the Epileptic Child,* M. Clin. North America, March 1958.

Hsu, Katharine H. K.: *The Problem of Positive Gastric Lavage Cultures in Elementary School Children,* J. School Health 28:121-126 (April) 1958.

Hsu, Katharine H. K.: *The Tuberculin Test as a New Approach to the New Era of Tuberculosis Control,* Dis. Chest 33:23-37 (Jan.) 1958.

Hunt, Warren H., III; Broders, A. C., Jr.; Hightower, Nicholas C., Jr.: *Primary Neoplasms of the Small Bowel: A Report of 81 Cases,* South. M. J. 51:482-488 (April) 1958.

Jackson, Daniel: *The Bacteriology and Pathogenesis of Tuberculosis,* Am. Pract. & Digest Treat. 9:729-732 (May) 1958.

Jordan, George L., Jr.: *Treatment of the Dumping Syndrome,* J.A.M.A. 167:1062-1066 (June 28) 1958.

Kaplan, Norman M., and others: *Hemophilus Influenzae Infection in Adults,* A.M.A. Arch. Int. Med. 101:515-523 (March) 1958.

Knox, John M.; Guin, Jere; and Cockerell, Earl G.: *Benzophenones—Ultraviolet Light Absorbing Agents,* J. Invest. Dermat. 29:435-444 (Dec.) 1957.

Knox, John M., and Spiller, William F.: *Eccrine Poroma,* A.M.A. Arch. Dermat. 77:726-729 (June) 1958.

Krusen, Edward M., and Ford, Dorothy E.: *Compensation Factor in Low Back Injuries,* J.A.M.A. 166:1126-1133 (March 8) 1958.

Lattimore, Joseph S.: *Strassmann Operation for Double Uterus,* Obstet. & Gynec. 10:696-700 (Dec.) 1957.

Leader, Abel J.: *Prostatic Calculi,* South. M. J. 51:600-604 (May) 1958.

McComb, Asher R.; Pridgen, James E.; Hills, William J.; Smith, Roy; Gregory, Ernest E.; Sammis, William; Wright, R. R.; Herff, August, Jr.: *Penetrating Wounds of the Abdomen,* Am. Surgeon 24:123-131 (Feb.) 1958.

McDonald, James F., Jr., and others: *Current Concepts of Therapy for Leukemia,* South. M. J. 51:783-791 (June) 1958.

Muirhead, E. E., and Booth, E.: *Experimental Membranous and Nodular Glomerulosclerosis,* A.M.A. Arch. Path. 65:654-665 (June) 1958.

Muirhead, E. E.; Halden, E. R.; and Groves, M.: *Drug-Dependent Coombs (Antiglobulin) Test and Anemia,* A.M.A. Arch. Int. Med. 101:87-94 (Jan.) 1958.

Nabors, G. C.: *Castor Oil as an Adjunct to Induction of Labor: Critical Re-Evaluation,* Am. J. Obst. & Gynec. 75:36-38 (Jan.) 1958.

Nelson, Robert S., and Scott, Norman M., Jr.: *Heterotopic Pancreatic Tissue in the Stomach—Gastroscopic Features,* Gastoenterology 34:452-459 (March) 1958.

Ochsner, John L., and Halpert, Bela: *Cavernous Hemangioma of the Liver,* Surgery 43:577-582 (April) 1958.

Olson, Stanley W.: *Exercise "Operation Rebound,"* J.A.M.A. 166:765-787 (Feb. 15) 1958.

Overton, Robert C., and Creech, Oscar: *Unusual Esophageal Atresia with Distant Membranous Obstruction of the Esophagus,* 35:674-677 (May) 1958.

Paulson, Donald L.: *Survival Rates Following Resection for Bronchogenic Carcinoma,* Ann. Surg. 146:997-1010 (Dec.) 1957.

Peddie, George H.; Jordan, George L., Jr.; and DeBakey, Michael E.: *Further Studies on the Pathogenesis of the Postgastrectomy Syndrome,* Ann. Surg. 146:892-898 (Dec.) 1957.

Pickard, J. M.: *The Use of Reserpine in the Management of Alcoholic Patients,* Clin. Medicine 5:499-501 (April) 1958.

Poth, Edgar J.: *The Dumping Syndrome and Its Surgical Treatment,* Am. Surgeon 23:1097-1102 (Dec.) 1957.

Poulos, Ernest: *The Open Treatment of Wringer Injuries in Children,* Am. Surgeon 24:458-460 (June) 1958.

Pratt, Edward L.: *Food Allergy and Food Intolerance in Relation to the Development of Good Eating Habits,* Pediatrics 21:642-647 (April) 1958.

Pritchard, Jack A., and Hunt, Charles F.: *A Comparison of the Hematologic Responses Following the Routine Prenatal Administration of Intramuscular and Oral Iron,* Surg., Gynec., & Obst. 106:516-518 (May) 1958.

Rentschler, E. H.: *Technic for Surgical Exposure of Vertebral Artery in the Cervical Region,* Ann. Surg. 147:537-540 (April) 1958.

Rosenberg, Harvey S., and Taylor, Fred M.: *The Myeloproliferative Syndrome in Children,* J. Pediat. 52:407-415 (April) 1958.

Rouse, Milford O., and others: *What the South Is Doing with the Problems of the Aging and the Challenges of the Future,* South. M. J. 51:242-245 (Feb.) 1958.

Schneider, John P., and others: *Injuries of the Ureters and Bladder Occurring During Pelvic and Left Colon Surgery,* GP 17:87-98 (June) 1958.

Schneider, Martin, and Rios, Gustavo: *Treatment of Chromophobe Adenoma of the Hypophysis,* South. M. J. 50:1509-1511 (Dec.) 1957.

Shelburne, Samuel A.: *The Retina in Hypertensive Disease,* Ann. Int. Med. 47:1154-1164 (Dec.) 1957.

Shires, Tom, and Adwan, K. O.: *A Review of the Advances in Management of Mechanical Obstruction of the Small Intestine,* Am. Surgeon 24:431-438 (June) 1958.

Small, Andrew B., and Ellis, Paul R.: *Laceration of the Distal Esophagus Due to Vomiting (the Mallory-Weiss Syndrome),* New England J. Med. 258:285-286 (Feb. 6) 1958.

Smith, Howard E.: *The Role of the Health Department in Tuberculosis Control,* Dis. Chest 33:482-487 (May) 1958.

Smith, Richard T.: *The Role of a Chronic Carrier in an Epidemic of Staphylococcal Diseases in a Newborn Nursery,* A.M.A. J. Dis. Child. 95:461-467 (May) 1958.

Spence, Harry M., and Boone, Thetford B.: *Injuries of the Ureter Due to External Violence,* Am. Surgeon 24:423-430 (June) 1958.

Stirman, Jerry A., and Wilson, Ben J.: *Renal Failure Following Hypovolemia: Its Relation to Therapy,* Am. Surgeon 24:469-473 (June) 1958.

Strauss, Elias: *Hospital Acquired Staphylococcal Infections,* Dallas M. J. 44:210-211 (April) 1958.

Thompson, Ian M., and Jackson, Ira J.: *Urologic Evaluation as a Neurologic Adjunct,* South. M. J. 51:428-432 (April) 1958.

Tompsett, Ralph: *Antimicrobial Therapy: The Concurrent Administration of Two Drugs,* Am. J. M. Sc. 235:585-595 (May) 1958.

Usher, Francis C., and Wallace, Stuart A.: *Tissue Reaction to Plastics,* A.M.A. Arch. Surg. 76:997-999 (June) 1958.

Von Werssowetz, Odon F.: *Cost of Rehabilitation in a Comprehensive Center,* South. M. J. 51:150-152 (Feb.) 1958.

Walker, Robert V.: *Arthroplasty of the Ankylosed Temporomandibular Joint,* Am. Surgeon 24:474-485 (June) 1958.

Wilson, Hugh E.; Cardozo, R. H.; Kee, J. L.; and Siebel, E. K.: *Closure of Interatrial Secundum Defects: Simplified by Utilization of a Previously Undescribed Anatomic Feature,* Am. Surgeon 24:439-451 (June) 1958.

Wise, Robert A.; Engelhardt, H. T.; Snyder, Harvey B.; Baird, Valliant C.: *Coronary Artery Disease,* South. M. J. 51:474-477 (April) 1958.

Wolf, Horace L., and Denko, John V.: *Osteosclerosis in Chronic Renal Disease,* Am. J. M. Sc. 235:33-42 (Jan.) 1958.

Gifts to the Library

Dr. Fred P. Helm, Austin, 14 journals.
Dr. Henry L. Hilgartner, Austin, 62 journals, 26 reprints.
Dr. J. E. Johnson, Austin, 5 journals, 5 reprints.
Dr. Sam Key, Jr., Austin, 33 journals.
Dr. Georgia Legett, Austin, 16 journals, 7 reprints.
Dr. Robert W. Loveless, Bastrop, 6 books.
Dr. R. G. McCorkle, Jr., Austin, 40 journals, 2 books.
Dr. Harry C. Powell, Jr., Austin, 50 journals.
Dr. Joe C. Rude, Austin, 25 journals.
Dr. T. M. Sousares, Austin, 86 journals.
Dr. Bruce Terrill, Stephenville, 32 journals.

★ Motion Pictures

Home Again

16 mm., black and white, sound, 35 minutes, 1957.

This warm, stirring film about American family life brings to the screen a sensitive and memorable story of a woman, victim of heart disease, who has greater fear of failing her children than she has of death. It reveals the valiant efforts of a father to keep his family together when the mother is taken away, and shows how a husband's reawakened tenderness can help his wife regain her self confidence and health. It also dramatizes for the first time in an American film the role of the Homemaker Service—a professionally supervised community resource for helping people in trouble.

The Man Who Didn't Walk

16 mm., black and white, sound, 32 minutes, 1958.

This is the third in the "Medicine and the Law" film series produced by Wm. S. Merrell Co. in cooperation with the American Medical Association and the American Bar Association.

★ Books

Books Newly Acquired

Alexander, Edythe Louise: *Care of the Patient in Surgery Including Techniques,* St. Louis, C. V. Mosby, 1958.

Bernreiter, Michael: *Electrocardiography,* Philadelphia, J. B. Lippincott, 1958.

Burdette, Walter J.: *Etiology and Treatment of Leukemia,* St. Louis, C. V. Mosby, 1958.

Johnson and Johnson: *Therapeutic Uses of Adhesive Tape,* ed. 2, 1958.

Press, Edward: *Accidental Poisoning in Childhood,* Evanston, Ill., American Academy of Pediatrics, 1956.

Terracol, J., and Sweet, Richard H.: *Diseases of the Esophagus,* Philadelphia, W. B. Saunders, 1958.

Book Notes

General Pathology

Based on lectures delivered at the Sir William Dunn School of Pathology, University of Oxford. Edited by SIR HOWARD FLOREY, Professor of Pathology, ed. 2. 932 pages. $16. Philadelphia, W. B. Saunders Company, 1958.

Several authors have contributed to produce an excellent book. Contrasted with most general textbooks of pathology, this text presents much less detailed, specific information. It compensates for this possible defect by a broader approach to the more general problems of pathology.

In general, the authors define the fundamental changes that take place in the body in response to injury, using this word in a broad sense, and discuss the present day views about the nature and causes of such changes.

There is greater correlation between pathology, bacteriology, and immunology than is offered in most texts. The section on immunology is especially outstanding.

—Paul M. Obert, M.D., Victoria.

Recovery from Schizophrenia; The Roland Method

JOHN EISELE DAVIS, Sc.D., President, Association for Physical and Mental Rehabilitation; Formerly, Chief, Corrective Therapy, Veterans Administration. 162 pages. $4.75. Springfield, Ill., Charles C Thomas, Publisher, 1957.

The purpose of this monograph is to call attention to what appears to be a significant contribution to the improvement of treatment of this difficult type of mental illness.

The sources of the material are based on Roland's experiences over a period of 8 years. The book aims at a description of what Roland does. The method and application of therapy include details of clinic organization and setup. The volume details a physical-psychological method for the specific purpose of reactivating and rehabilitating schizophrenic patients.

Pharmacology and Therapeutics: A Textbook for Students And Practitioners of Medicine And Its Allied Professions

ARTHUR GROLLMAN, Ph.D., M.D., F.A.C.P., Lecturer in Pharmacology and Toxicology, Medical Branch, and Professor and Chairman of the Department of Experimental Medicine, Southwestern Medical School, University of Texas, Dallas, ed. 3, revised and enlarged. 192 illustrations with 2 in color. 1,034 pages. $12.50. Philadelphia, Lea & Febiger, 1958.

Practitioners and students who want a sound foundation for the rational and scientific use of drugs will find it in this ideally organized presentation. The general plan of the earlier editions has not been altered since it has been found highly satisfactory for teaching purposes. The inclusion at the end of each chapter of the pertinent data on all official British and American preperations has served as a useful reference to which the reader can turn for description of the properties, dosage, and mode of administration. It is written by an authority who is a pharmacologist and a practitioner of medicine.

The Atomic Age and Our Biological Future

H. V. BRONDSTED. Translated by E. M. Huggard. 80 pages. $2.75. New York, Philosophical Library, 1957.

The aim of this book is to describe simply, and with a minimum of technical language, the biological and particularly the genetic effects that may ensue from the increasing use of atomic energy. The book is written in a popular style because its aim is to give a wide variety of people an opportunity to review for themselves what is happening in the atomic age.

H. V. Brondsted has been professor of zoology at the University of Copenhagen since 1948. The present work is based on a series of lectures to the general public.

Office Gastroenterology

ALBERT F. R. ANDRESEN, M.D., Clinical Professor Emeritus of Medicine, State University of New York College of Medicine at New York City; Attending Physician, Long Island College Hospital. 707 pages. $14. Philadelphia, W. B. Saunders Company, 1958.

In the preface Dr. Andresen states that he has endeavored to produce a monograph, based on personal experience, which would present simple and specific information regarding gastrointestinal diseases and their treatment. From an encyclopedic standpoint he has succeeded admirably as almost every conceivable gastrointestinal manifestation has been discussed. Visceroptosis, for example, has been debunked again. But one wonders if it should receive mention at all in present day monographs.

For the physician with particular interest in diet therapy the author has specific and detailed diet formulas. On the other hand, some of his recommendations will provoke considerable controversy. For instance, he believes that transfusions should be avoided insofar as possible in the management of gastrointestinal hemorrhage and that diagnostic procedures should be deferred, if possible, the first few days.

The index is complex, and the illustrations and reproductions of roentgenograms are excellent. This volume will serve the busy general practitioner as a reference book for more specific information relating to gastroenterology than is obtainable in standard texts of internal medicine. Dr. Andresen is to be congratulated for his effort in writing this monograph.

—O. Roger Hollan, M.D., San Antonio.

Gynecologic and Obstetric Pathology: With Clinical and Endocrine Relations

EMIL NOVAK, M.D., F.A.C.S., Late Assistant Professor Emeritus of Gynecology, Johns Hopkins Medical School, Baltimore; and EDMUND R. NOVAK, M.D., Assistant Professor of Gynecology, Johns Hopkins Medical School, Baltimore, ed. 4. 683 illustrations, 25 in color. 650 pages. $14. Philadelphia, W. B. Saunders Company, 1958.

The fourth edition of this standard text is the last of the series offered by the inimitable Dr. Emil Novak. It is written in the same easily read manner, but extremely descriptive style as the previous editions.

The two chapters on cytology and placental pathology have been revised and elaborated upon to great advantage. The standard chapters have been revised and brought up to date with regard to certain pathological problems that are still equivocal. The bibliography has been added to extensively. As always, Novak and Novak have been generous with their illustrations, both gross and microscopic. These illustrations are excellent in every respect; however, the addition of a larger number of colored illustrations would have been to greater advantage.

It is regrettable that the ravages of time have taken the senior author from our midst, and we no longer will be able to benefit from his vast knowledge in the field of gynecologic pathology and from his rare sense of humor. It is the intent of the junior author to continue the work of his father in co-authoring future editions with Dr. Donald Woodruff of Johns Hopkins.

As in the past, this textbook is an important tool to medical students and residents, pathologists, and the practitioners of obstetrics and gynecology.

—George E. Rabinowitz, M.D., McAllen.

Our Nuclear Adventure: Its Possibilities and Perils

D. G. ARNOTT. 170 pages. $6. New York, Philosophical Library, 1958.

In his prologue, the author states, "It is difficult for me to understand how sound decisions on scientific matters can be taken in a state where science means little or nothing to the average individual. If every scientist could somehow be persuaded to write one popular article or give one popular lecture on science a month, the state of public opinion in regard to science would be transformed and the world would be correspondingly safer."

Of the two important reasons the subject of this book is important—first, the danger, and, second, the unlimited power to be provided by nuclear energy—the second reason is less generally realized. The world is now faced with the choice between limitless opportunities for progress, or an inevitable self-destruction.

The author attended the Geneva Conference of Atomic Scientists and served on the Atomic Sciences Committee of the Association of Scientific Workers.

Theory and Problems Of Child Development

DAVID P. AUSUBEL, M.D., Ph.D., Bureau of Educational Research, University of Illinois. 650 pages. $12. New York, Grune and Stratton, Inc., 1958.

This voluminous treatise by Dr. Ausubel deals largely with theory, as the title implies. The book is rather deep reading unless the reader is a trained psychologist. The clinician may be impressed, as I was, by the use of words, words, words to convey the ideas of the psychologist. The context employs the usual terminology used by psycholo-

gists and psychiatrists. In these special fields, the book would make excellent reading for those interested in theory and problems of child development.

The book is divided into four parts: (1) theoretical foundations of child development, (2) the beginning of development, (3) personality development, (4) special aspects of development.

Under the first part there is excellent discussion of the nature of developmental processes together with problems and methods of developmental research.

The second part deals with prenatal development and the birth processes; neonatal behavior and capacities; together with infant care problems and issues, dogma, fads, and fashions.

Part 3 deals with personality development, the ego, parent-child relations, psychological aspects of personality development, and relationship with peers.

Part 4 discusses physical growth and motor development, development of language, perceptual and cognitive development, and lastly, the growth of intelligence.

The book has an excellent index which should aid those who want to delve into small portions of the text without heavy reading. Dr. Ausubel is to be commended for his thorough coverage of a theoretical and little explored field of child development.

—J. Ralph Lemmon, M.D., Amarillo.

Noise and Your Ear

ARAM GLORIG, JR., M.D. Director of Research, Research Center of the Subcommittee on Noise in Industry, Committee on Conservation of Hearing of the American Academy of Ophthalmology and Otolaryngology, Los Angeles. 152 pages. $6.50. New York, Grune & Stratton, Inc., 1958.

In the preface, the author states the book is primarily for persons who require only a general knowledge of the subject. It is not intended for the expert. It is hoped the book can be used as a reference work. It is divided into seven sections with a total of 14 chapters.

The Introduction states that the ear responds to frequencies in a 10 octave range from 16 cycles per second to about 16,000 cycles per second. Excessive exposure to noise can produce a permanent hearing loss. An acceptable definition of "noise" has been hard to attain. An early definition was "sound without agreeable musical quality." The current definition of noise is "any unwanted sound."

As to the subject of conservation of hearing in noise, the author says that several national committees have been formed to study the effect of noise on hearing. When speaking of noise exposures and damage risk criteria, he states that we still are unable to put number to damage risk criteria.

Chapter 2 gives a brief history of the development of compensation laws. It is pointed out that terms may have a different legal and medical meaning. In a discusssion of compensation of job connected injury, it is noted that laws fair to both employer and employee are being enacted. The reader is reminded that some specific diseases have been a direct result of the occupation iself. Recent interpretations of workmen's compensation laws are mentioned with the comment that the Wisconsin amendment on hearing appears to be fair to both labor and industry. The doctor's duty in compensation cases is to do everything possible to preserve human functions.

A glossary of audiological and medicolegal terms is given from page 14 to 29. Then come sections on audiometry, hearing loss, effects of noise exposure, and conservation of hearing.

Finally there is a section on compensation and rating scales. Potential loss for the next decade due to hearing loss is estimated at $154,000,000. Hearing for speech is the most important common use of the auditory function, so loss of hearing for speech is the handicap to be measured. Normal hearing is defined as an area that extends 15 decibels above zero on the audiometer to 15 decibels below. Total deafness in one ear does not produce 50 per cent handicap if the hearing in the other ear is within normal limits. It is about a 20 per cent loss.

—C. H. Dolph, M.D., Baytown.

Management of Complications in Eye Surgery: Avoidance of Pitfalls and Treatment of Difficult Situations in Ophthalmologic Operations

R. M. FASANELLA, M.D., Ed., Chairman of the Section of Ophthalmology, Yale University School of Medicine. 422 pages. $16. Philadelphia, W. B. Saunders Co., 1957.

This is an excellent book recommended for all ophthalmic surgeons. In addition to Dr. Fasanella, 20 well recognized authorities have written a chapter each on a certain phase of eye surgery and its pitfalls. The result will prove to be a distinct step forward to eye surgeons who are attempting to analyze and solve the inevitable complications of surgery they are trying to do. It has been truly stated that the only surgeon who has no complications is the surgeon who has done no surgery.

Starting with the general medical, psychiatric, and anesthetic complications in ophthalmic surgery, the book covers the various troubling factors of all phases of external and internal ocular surgery. Following these are discussions of the use of medications and radiation in the therapy of various complications. Notes on the rehabilitation of the low vision patient and a symposium chapter by several authors on the estimation of the loss of visual efficiency complete the volume.

Dr. Fasanella is to be complimented in his assembling a fine book on a subject of pressing concern to ophthalmic surgeons. For them the book will be extremely helpful.

—Robert D. Mertz, M.D., Corsicana.

Roentgen Diagnosis of Abdominal Tumors in Childhood

CHARLES M. NICE, JR., M.D., Ph.D.; ALEXANDER R. MARGULIS, M.D.; and LEO G. RIGLER, M.D., all from the Department of Radiology, University of Minnesota Medical School, Minneapolis. 75 pages. $5.75. Springfield, Ill., Charles C Thomas, 1957.

The method of approach to the differential diagnosis of abdominal tumors in children is presented in this short and instructive book. The accuracy in diagnosis of these tumors is not always obtained by all laboratory and clinical studies including surgery and biopsy. Definite localization of a mass is helpful to the surgeon in his planned approach, and the possibilities can be somewhat narrowed down and often unnecessary or harmful surgery can be avoided. This may be particularly true in hydrometrocolpos, anterior sacral meningocele, and choledochal cysts. The method described requires little manipulation and frequently simple roentgenological procedures.

The anatomy and embryology are discussed, giving a rational basis to the method presented. The absolute necessity for good position and technique is stressed. The basic examination includes anteroposterior, lateral, and upright films of the abdomen. Barium by mouth and enema also are used frequently. The indications for additional studies, such as pyelogram, cholecystogram, and occasional use of presacral air and pneumoperitoneum, are discussed. These

studies are used, depending on the location of the mass, when necessary for more precise localization.

The classification of masses as to position is given as follows: (a) intraperitoneal masses in the region of the liver, (b) other intraperitoneal masses, (c) renal and adrenal masses, and (d) other extraperitoneal masses. The more important masses in these areas are discussed, but detailed discussion of the conditions other than as to position and appearance is not included. The incidence of masses in the various locations is given, but the significance of these figures in general is questioned, as they are in selected groups.

A chapter is devoted to each of the regions mentioned with detailed discussion and features of the more important tumors. The rarer tumors are discussed only because of their position rather than their particular importance. The method of analysis of abdominal masses in infants and children described by the authors when correlated with clinical evaluation should result in a high accuracy in diagnosis.

An excellent bibliography is included. This book is recommended for all radiologists and others doing roentgen-ray examinations on infants and children.

—J. E. Gardner, M.D., Corpus Christi.

One Surgeon's Practice

FREDERICK CHRISTOPHER, M.D., Emeritus Professor of Surgery, Northwestern University Medical School. 151 pages. $4. Philadelphia, W. B. Saunders Company, 1957.

This valuable book is brief, readable, and practical. It presents the opinions and personal experiences of a well known surgeon who, with wisdom and in detail, discusses practically all the major nonscientific problems which face the surgeon. Although the reader occasionally may find himself in disagreement on certain matters, he will respect the courage of the author's analysis and personal stand on controversial propositions. While part of the book relates personal triumphs or recites entertaining personal anecdotes, most of the volume concerns itself with a delightfully written and detailed account of how the author handles certain important problems met in the daily practice of a surgeon. Potentially the audience of this book is large; since its language and subject matter are largely nontechnical, it is understandable to the premedical student or any layman. It will prove interesting to all doctors who practice clinical medicine; but probably the group which will profit most from its reading will be the intern, the surgical resident, and the young surgeon in private practice.

Perhaps its most valuable parts deal with the human relationships in surgical practice. In relationship to the patient, the author gives his techniques for discussing the forthcoming operation; how to determine and discuss fees; what to tell patients with cancer (in general, the author feels that they should not be told the diagnosis); how to handle the apprehensive young child patient; and points on the handling of the family of the surgical patient. In relationship to professional colleagues, the author discusses the surgeon's relationship to interns, residents, anesthesiologists, nurses, general practitioners, and internists. The unethical practices of fee splitting and ghost surgery are discussed and condemned. The proper conduct of a surgical consultant is outlined.

Quite useful are those parts of the volume dealing with the relationship of the surgeon to various professional organizations and institutions, especially medical societies and the organized staff of the modern hospital in which he practices.

Of considerable practical value are those sections concerned with such personal matters as how the young surgeon should select the locality in which to practice; whether one should practice individually or in a group, partnership, or association; and malpractice insurance and litigation. The author's views on the participation by doctors in community enterprises and on the social life and recreation of doctors are interesting and thought provoking. His views on the means of obtaining adequate postgraduate education are useful.

This little book is always refreshing, sometimes inspiring, and frequently helpful. It undoubtedly will enjoy considerable popularity.

—Edwin M. Sykes, Jr., M.D., San Antonio.

The Human Ear Canal

ELDON T. PERRY, M.D., Instructor in Dermatology, Wayne State University. 116 pages. $4.75. Springfield, Ill., Charles C Thomas, 1957.

This little book is well organized and interestingly presented. It should be "must" reading for anyone attempting to treat otitis externa.

The author takes up in detail the gross and microscopic anatomy, following which he discusses physiology, bacteriology, the properties of cerumen, and the clinical picture of otitis externa. One interesting chapter is devoted to the experimental production of otitis externa. Methods of diagnosis are well covered. General treatment measures are briefly discussed.

The author states that although bacteria can be cultured from most well ears at any time, they are seldom the primary cause of trouble but are important in a secondary role. In healthy ears the micrococci group was most commonly found, while in the acute ears Pseudomonas aeruginosa was most frequently found. Fungus is important in only a minority of cases.

The bibliography is impressive.

—John L. Dean, Jr., M.D., Crockett.

The Closed Treatment of Common Fractures

JOHN CHARNLEY, M.B., F.R.C.S., Orthopaedic Surgeon, Manchester Royal Infirmary, Park Hospital, and Wrightington Hospital; Lecturer in Orthopaedics, Manchester University. ed. 2. 260 pages. $10. Baltimore, Williams and Wilkins Co., 1957.

This British author's second edition can be of great value to the man who is seriously interested in acquiring the art, as well as the skill, of fracture treatment, whether by open or closed methods. Exposure of the student to the ideas in this book should begin at about the senior year in medical school and continue at least through the formative training years, before ideas have become too fixed.

In this edition, the author has succeeded in justifying his advocacy of conservative treatment on biological grounds. His first edition was too elemental in this attempt.

The entire first chapter—perhaps the most valuable chapter in the book—is a complete, concise review of the healing process of bones. In this chapter, the author gives his most convincing argument in favor of closed treatment rather than open treatment, wherever possible. He demonstrates that closed treatment is often in closer harmony with the natural process of fracture healing than is operative treatment. In open operations the surgeon who has an ingrained knowledge of these principles will unconsciously minimize the damage to the blood supply and periosteal attachments that occurs in any open reduction.

Chapter 2 is a good "how to do it" of the actual mechanics of conservative fracture treatment. This is unusual in a textbook since manipulative treatment of fractures is considered an art, something defying description, that must

be learned only by practice. In contrast, there are many available textbooks on operative procedures for fractures.

In chapter 3, the author's "Law of Closed Treatment" fairly well summarizes his ideas regarding one of the long held "bugaboos" of conservative treatment of stiff joints. His "law" states: "after fracture of the shaft of a long bone, the associated joints will tolerate fixation for the duration of normal union without either permanent or significant loss of motion."

Chapter 4 deals with fractures that may be safely treated without plaster fixation. Chapter 5 is an excellent description of the actual application of plaster technique. This is another important feature in fracture treatment that is not ordinarily described in textbooks.

The remaining chapters of the book give good descriptions of the principles of treatment, as well as actual detailed technique of the more common fractures encountered. Separate chapters are given over to closed treatment of fractures of the humerus and forearm bones, as well as to the Colles' fracture, the Bennett fracture, and fractures of the fingers; also, fractures involving the femur, bones of the leg, and the very common Pott's fracture.

A close study of this book, especially during the formative years, might help to swing the pendulum away from the American tendency in recent years to open too many fractures.

Also, I believe that closer application of the principles outlined in this book would help us all to increase the personal satisfaction that comes from developing the art of closed treatment of fractures rather than the science of open treatment.

—Frank B. Boyle, M.D., Port Arthur.

★ **Texas Medical Association**

Public Relations Conference, Orientation Program Draw Doctors to Austin

Hurricane Ella encouraged good public relations the week end of September 6-8 when many Texas physicians along the coast areas did not attend the Texas Medical Association's fourth annual Public Relations Conference in order to stay on call in their communities in case they were needed.

The Association's Public Relations Conference, along with the fifth Orientation Program and the fall meeting of the Executive Council, was attended by 349 doctors at the headquarters building in Austin. Thirty-one boards, councils, and committees of the Association met.

Doctors attending the Orientation Program and Public Relations Conference met jointly to hear talks by three guest speakers, John L. Bach of Chicago; Dr. Theodore G. Klumpp of New York, and Frank R. Barnett of New York. The groups saw the Association's General Practitioner of the Year award given to Dr. William P. Ball of Cleburne and attended a luncheon Saturday noon at the headquarters building as guests of the Association and a hospitality hour Saturday evening, courtesy of the Charles O. Finley and Company (the scheduled cruise on Lake Austin and fish fry was canceled due to threatening rains.)

The Orientation Program, presided over by Dr. James D. Murphy, Fort Worth, and Dr. C. E. Willingham, Tyler, was attended by 103 new and transfer physicians who heard talks on such matters as medical economics, public relations, medicolegal questions, and services rendered by the Association.

The public relations program, with Dr. Joe R. Donaldson of Pampa presiding, included two panels on "1958 PR Projects for County Medical Societies" and "Jury Panel—Problems of Grievance Committees." The Executive Council met Sunday morning to hear reports from the various boards, councils, and commitees which met Friday evening, during the day Saturday, and Sunday morning. Dr. Howard O. Smith of Marlin presided.

Guest Speakers

Three guest speakers who addressed those attending the Public Relations Conference and Orientation Program September 6 were John L. Bach, Chicago, director, press relations, American Medical Association; Dr. Theodore G. Klumpp, New York, president, Winthrop Laboratories, Inc.; and Frank R. Barnett, New York, director of research, the Richardson Foundation, Inc.

New Styles in American Medicine

Good medical communication is the result of good communication between the medical profession and the representatives of the different mediums of public information upon whom the medical profession depends to get its message across, pointed out John L. Bach, director of press relations for the American Medical Association, in his talk, "New Styles in American Medicine."

Medical communication is ever-changing, commented Mr. Bach. The general public of today has become vitally interested in medical news. A survey of magazines in 1923 showed a total of 30 articles published on the subjects of cancer, tuberculosis, heart disease, and polio. In 1953, a total of 299 articles were published in popular magazines alone on these same subjects.

Mr. Bach added that often the setting up of a code of cooperation between a county medical society and local members of the press, radio, and television can bring about situations which establish a friendly atmosphere, thus keeping a working relationship between the medical profession and all mediums of public information. In getting such a code approved and adopted, dinners, meetings, committee conferences, and discussions are held—better understanding is created.

Partners in Progress

More progress in the conquest of disease and the prolongation of life has been achieved in the past 50 years than in the 999 centuries of man's previous existence, Dr. Theodore G. Klumpp, New York, president of Winthrop Laboratories, Inc., told physicians in his speech on "Partners in Progress."

These gains have come about through the collaboration of the medical profession and the pharmaceutical industry, working together for the common good. The productive vigor of the pharmaceutical industry, brand names, and

the public's idea that the cost of medical care is too high, however, pose problems calling for education and public relations effort, said Dr. Klumpp.

The pharmaceutical industry and the medical profession have a joint responsibility to show the public that socialized medicine is neither free nor good medicine if this threat to our way of life is to be resisted, stated Mr. Klumpp.

Strategy Is Everybody's Business

Frank R. Barnett, New York, director of research, Richardson Foundation, Inc., in his talk "Strategy Is Everybody's Business," told the doctors that Americans must turn their thoughts from welfare to survival because (1) America is no longer shielded by its oceans, (2) the Communists are stepping up their warfare by words, and (3) the Red strategy of terror can be used here to sabotage national will and paralyze the country with doubt and defeatism.

To withstand these pressures, we must have great numbers of civilian leaders who understand the strategy of the enemy and can articulate the unique values of American civilization, said Mr. Barnett. This means that Americans of all ages must do their homework, not only in science and engineering, but in philosophy, political science, economic theory, history, and foreign languages, he said.

We have to know who we are, what we really stand for, and what the enemy is up to before we can be very effective in persuading others to stand firm. It should be remembered that great events are always determined by minorities and that time is only on that side which knows how to use it, Dr. Klumpp stated.

Public Relations Conference

At the third annual Public Relations Conference held Saturday, September 6, Dr. Joe R. Donaldson, Pampa, chairman of the Committee on Public Relations, presided.

PR Projects Outlined

A panel of five doctors and one county medical society executive secretary outlined during a panel discussion Saturday morning a round-up of projects undertaken by their respective societies as part of their cooperative work with lay health groups, civic organizations, newspapers, and the general public for more understanding and better health measures in Texas' communities.

Dr. Thomas Royce of Houston, member of the Association's Committee on Public Relations, was moderator.

A concentrated effort on the part of the Denton County Medical Society to cooperate closely with newspapers, radio, and television for reporting of medical news is being carried on, reported Dr. D. K. Boyd of Denton. Individual physicians are being encouraged to take active parts in civic clubs and public affairs. The society has a speakers bureau to provide medical speakers for any organization that expresses a desire for them.

In promoting Medical Education Week, said Dr. William M. Sherrill of Houston, the Harris County Medical Society used all available channels of publicity. Cooperation was received from newspapers, radio and television stations, and industrial and chamber of commerce publications. The society also arranged with Baylor University College of Medicine and the University of Texas Postgraduate School of Medicine to provide speakers to civic clubs.

Dr. G. M. McCaskey of Corpus Christi reported that the work of the Nueces County Medical Society included the

Three out-of-state guest speakers were heard by those attending the Public Relations Conference and Orientation Program held in Austin September 6-7. At the top, John L. Bach of Chicago chats with Mrs. John D. Gleckler of Denison, President of the Woman's Auxiliary to the Texas Medical Association. Dr. Theodore G. Klumpp of New York emphasizes a point at the center. At the bottom, Frank R. Barnett of New York is being greeted by Dr. Van D. Goodall of Clifton, a member of the Committee on Public Relations.

preparation of pamphlets carrying information regarding what newcomers to the city can do to get medical care and suggestions aiding the newcomer in obtaining proper and quick medical attention should they need it. These pamphlets are distributed through the Welcome Wagon organization. The physicians of the society have also sponsored prizes at student science fairs, maintain a speakers bureau, and hold regular meetings with civic leaders.

Waxahachie, reported Dr. Norman L. West of the Ellis County Medical Society, has successfully developed a rotating system in the local hospital emergency room. By all physicians taking turns doing a week of emergency room work, a doctor is available at all times, patients whose own physicians are not available or who do not have a preference for any doctor do not suffer from lack of immediate medical care, and better doctor-patient relations are maintained.

The Dallas County Medical Society sponsored the "Dallas Fights Its Waistline" week, which brought statewide and national recognition. Millard Heath, executive secretary for the society, outlined the work done prior to and during the week. The project was designed to promote healthful ways of undertaking weight reduction. Television shows, exhibits, and scale booths were used to demonstrate the healthful methods for getting rid of excess weight.

Substituting for Dr. L. G. Cigarroa of Laredo, Dr. M. E. Malakoff of that city told of the work done in connection with youth activities by the Webb-Zapata-Jim Hogg Counties Medical Society. The society sponsored a regulation banning the use and sale of fireworks, reducing the injuries from firecracker explosions. They also submitted an ordinance to the city council prohibiting the abandonment of empty ice boxes and cabinets in vacant lots and backyards within the city limits in order to prevent children from entering these boxes and cabinets and dying of asphyxia. Members of the society also gave free physical examinations for members of the Boy Scouts and other youth groups and gave demonstrations of methods of artificial respiration at local swimming pools. The society is now working with the school district in developing a compulsory driver training course for all high school students.

A buzz session group discusses one of the grievance committee cases reviewed in a jury panel session at the Public Relations Conference. The presentations reviewed were cases which actually had come before a county medical society grievance committee.

Problems of Grievance Committees

Dr. Franklin W. Yeager, Corpus Christi, President-Elect of the Texas Medical Association and former chairman of the Board of Councilors, moderated a session on grievance committee problems at the Saturday afternoon conference. Special feature of this part of the program was the presentation of three cases which actually had come before a county medical society grievance committee. For each case a jury panel was on the platform and the audience was divided into small groups. After the protocol of the case was read, 10 minutes was allowed for individual discussion by the jury panel and by the audience groups. A report on the decision of the panel and of several audience groups then was presented, and finally the disposition of the case in reality was read.

Jury panel for case 1 included Dr. Milton V. Spark, Waco, chairman; Dr. Homer C. Matthes, Bay City; Dr. Margaret Watkins, Dallas; and Dr. R. B. G. Cowper, Big Spring. For case 2, Dr. James S. Reitman, Laredo, was chairman, with Dr. J. Ross Shipp, Waco, and Dr. Mina D. Watkins, Lubbock, as members. For case 3, Dr. Lovell B. Crain, Houston, served as chairman with Dr. Kermit W. Fox, Austin, and Dr. Andrew J. Magliolo, Dickinson, as panelists.

Dr. Yeager explained that the public had been led by those attempting to pass socialized medical legislation to be sensitive to medical costs and less full of esteem for the medical profession than in previous years, thus making a grievance committee system of importance to maintain good will. When laymen are aware that a full hearing of their complaints can be held before a group which will neither whitewash nor persecute, feelings toward the medical profession are helped. It is important to choose for grievance committee members, Dr. Yeager emphasized, doctors of integrity, courage, and experience.

Orientation Program

The fifth Orientation Program sponsored by the Texas Medical Association drew an audience of 103, including 60 new members, 39 transfer members, 3 guests, and 1 intern. Presiding over the program was Dr. James D. Murphy, Fort Worth, Vice-Speaker of the House of Delegates.

In addition to the guest speakers, registrants heard the following presentations: "Welcome: Objectives of Orientation Program," Dr. Travis Smith, Abilene; "The Medical Association: An Accounting of Stewardship—What Happens to Your $50?" Dr. Troy A. Shafer, Harlingen; "Public Relations and Socio-Economic Considerations in the Practice of Medicine," C. Lincoln Williston, Austin; "Medical Ethics Considerations in the Practice of Medicine," Dr. C. E. Oswalt, Jr., Fort Stockton; "Medical Etiquette: Obligations of the Physician to Colleagues and to the Profession," Dr. R. Mayo Tenery, Waxahachie; "Serving the Doctors of Texas," Donald M. Anderson, Austin.

The program also included "Medical Economics Considerations in the Practice of Medicine," Dr. Harvey Renger, Hallettsville; "Principles of Office Management," Mark M. Myers, Dallas; "Voluntary Health Insurance," Dr. Roy T. Lester, Dallas; "Workmen's Compensation Laws: Charges, Obligations, and the Law," Smith Pettigrew, Dallas; "Legal Aspects of Medical Practice: Malpractice—How to Avoid It," Philip R. Overton, Austin.

Most of the subjects have been presented at previous orientation programs. Among the newer topics was that of Mark M. Myers, Dallas, Dental-Medical Economics, who

The Orientation Program was held in a room draped from a section of the Texas Memorial Library stack area. It proved commodious and comfortable for the 103 in attendance. Presentations by guest lecturers, physician members, and others were included in the program.

spoke on office management. He emphasized the factors necessary for reaching the summit of success. Among those include strength and good health, mental ability, adequate office space, professional zeal, and accurate filing systems.

Dr. Mayo Tenery stressed that basic principles of medical etiquette remain the same and that the golden rule has not been repealed. Most difficulties that arise in the realm of medical etiquette today, he said, arise when one physician sees another physician's patient without a referral or when the patient is seen in consultation. He mentioned good practices to follow in various such situations.

Executive Council Hears Progress of Committees

A study of building needs of the Association, developing plans for the 1959 annual session, the importance of adequate legislative support of medical education in the state, and a comprehensive survey into military and veterans medical problems were brought to the attention of the Executive Council of the Texas Medical Association when it convened September 7 at the Association headquarters in Austin. The President, Dr. Howard O. Smith of Marlin, presided as reports from almost all councils and committees were submitted.

Many of the reports resulted from meetings held during the week end, a number including representatives from organizations and agencies outside the Association but with interest in problems relating to medicine.

Excerpts from some of the reports, all accepted by the council unless noted otherwise, follow:

Trustees.—An architectural survey and study of building needs for the Texas Medical Association was reported by the Board of Trustees as authorized for the immediate future in recognition of inadequate meeting space for periods of conferences and programs such as the one in progress, inadequate parking space, and a Library collection rapidly outgrowing available stack facilities. Also planned is a plaque for display in the Library honoring those who have established endowments for the benefit of the Library. Approval of annual session plans, including $5,000 for guest speakers, was noted with the comment that the over-all expenditures for annual session are second only to those for the *Journal*. Allocation of $500 for prizes in the essay contest of the Association of American Physicians and Surgeons was announced.

Councilors.—Attention was called to a survey on the orientation program, copies of which may be obtained upon request. Warning was given that consultation or collaboration with osteopaths is unethical and that the Board of Councilors has authority to revoke the charter of county medical societies which fail to enforce ethical conduct of their members.

Executive Secretary.—A resume of arrangements for the annual session in San Antonio was given. The Hilton Hotel has been recommended as headquarters for the Association with some activities being in the Gunter and Menger Hotels and the St. Anthony as headquarters for the Woman's Auxiliary. Recommendations of an inspection committee that the 1961 annual session be held in Galveston, April 22-25, with the Buccaneer and Galvez Hotels being designated jointly as headquarters for the Association and the Jack Tar Hotel as headquarters for the Auxiliary, and with most Association meetings being held in the Moody Convention Center were approved. Mention was made of certificates, letters of congratulation, and copies of the book on the history of the Texas Medical Association which have been sent in 1958 for the first time to doctors elected to honorary membership. Growth of the Association to a membership of 7,000 in the American Medical Association will entitle Texas to an eighth delegate in the AMA House of Delegates in 1959.

Medical Jurisprudence.—The Council on Medical Jurisprudence reported a worthwhile meeting with representatives of the Texas Hospital Association, Private Clinics and Hospitals Association, Texas Pharmaceutical Association, Department of Public Welfare, Council on Medical Economics, and Council on Medical Education and Hospitals. Proposed legislation dealing with hospital licensing, a revised tuberculosis code, vendors medical care payments, and narcotics was discussed but will not be reported on until later.

Scientific Work.—An annual session similar in format to that of last April is being arranged for April 18-21, 1959, in San Antonio. Eighteen guest speakers have ac-

cepted already out of a total of about 25 anticipated.

General Arrangements for Annual Session.—Efforts are being made to permit those attending the 1959 annual session to participate in some of the Fiesta activities, especially the River Parade and a Night in Old San Antonio, and an unusual setting for Memorial Services—the Alamo—is being obtained.

Medical Economics.—Representatives of the Health Insurance Council and the Council on Medical Economics discussed mutual problems with each other, and better liaison between the medical profession and the insurance industry in Texas seems evident. The council deferred an opinion on the proposed American Medical Association fee schedule until it could be studied further. Progress of the new life insurance program sponsored by the Texas Medical Association appears favorable.

Cancer.—Suggestions relative to emphasis on cancer at the 1959 annual session were referred to the Council on Scientific Work.

Medical History.—An exhibit featuring books by Texas physicians and highlights of Dr. Anson Jones is planned for the annual session. Additional articles on historical subjects are being prepared for publication in the Library section of the *Journal*, and work on bringing up to date the current history of the Texas Medical Association continues.

Medical Education and Hospitals.—The Executive Council gave particular backing to a recommendation from the Council on Medical Education and Hospitals that the Council on Medical Jurisprudence and officers of the Association encourage the Legislature to give adequate support to the medical schools of the state already in existence and to establish additional schools to take care of increasing needs.

Public Relations.—An office plaque citing the ideals of the Texas Medical Association for distribution to and display by members of the organization is under consideration, as is an annual award honoring the Medical Educator of the Year.

American Medical Association Delegates.—Reference to a previous report in the *Journal* on the June meeting of the American Medical Association was made (July issue, page 512). It was noted that Dr. Troy A. Shafer, Harlingen, served as chairman of the Reference Committee on Military and Veterans Affairs and Dr. Joseph B. Copeland, San Antonio, as a member of the Reference Committee on Reports of the Board of Trustees and Secretary when the AMA House of Delegates met. Texas physicians were invited to send suggestions to the Texas delegation before the clinical meeting of the AMA in Minneapolis the first week in December. A reminder was given that the clinical meeting in November, 1959, will be held in Dallas.

Mental Health.—Recommendations were submitted that the Academy of General Practice and the Texas Neuropsychiatric Association be informed of the desirability of appointing inspection teams for each of the state mental hospitals to continue annual inspections and that the Board for Texas State Hospitals and Special Schools organize a permanent planning and advisory committee to insure the implementation of the Gerty plan, as recommended previously.

Emergency Medical Service.—"Operation Recheck," a disaster exercise September 19 in Dickinson to be conducted entirely by the students of the University of Texas Medical Branch, was announced. Approval by the Committee on National Emergency Medical Service of a brochure on mass medical care in defense and disasters to be distributed to county society presidents, secretaries, and civil defense chairmen was noted. The availability for disasters or demonstration of two 200 bed emergency hospitals was emphasized.

School-Physician Relationships.—Distribution of a summary of the second Texas Conference on Physicians and Schools and of three pamphlets for physicians and for school administrators was reported. The Committee on School-Physician Relationships will be co-sponsor with the Texas Society of Athletic Team Physicians, the Department of Physicial Education of the University of Texas, Texas Interscholastic League, and Texas High School Coaches Association of high school sports injury conferences on the county level and of papers on sports injuries at the next coaches' school in 1959.

Rural Health and Doctor Distribution.—The Committee on Rural Health and Doctor Distribution plans a brochure listing the advantage of rural practice for distribution to medical students and through the Physicians Placement Service. In cooperation with the Council on Medical Education and Hospitals, it is hoped to influence the medical

Registration, which came to a total of 349, called for the assistance of a Future Nurse to help keep the lines moving. Other Future Nurses from Austin aided with messages, refreshments, the check room, and wherever extra hands were needed.

schools to put greater emphasis on training general practitioners. Further study with the Texas Farm and Ranch Safety Council on prevention of accidents on the farm was considered beneficial.

Scientific Exhibits.—Space for scientific exhibits at the 1959 annual session is large in comparison with previous years. The Committee on Scientific Exhibits particularly invites displays in fields of practice which have not been well covered recently: pediatrics, dermatology, urology, obstetrics and gynecology, and orthopedics.

Patient Care.—In line with previous approval by the Texas Medical Association's House of Delegates, progress is being made in cooperation with the Board of Nurse Examiners, Texas Graduate Nurses Association, and other interested groups to draft legislation revising the nurse practice act.

Cardiovascular Disease.—Dissemination of information on cardiovascular conditions continues through a speakers bureau and monthly pages in the advertising sections of the *Journal.* This latter is in cooperation with the Texas Heart Association.

Military and Veterans Affairs.—Nine recommendations were submitted to the Executive Council by the Committee on Military and Veterans Affairs: (1) That the committee be empowered to prepare a study on the social, economic, and professional impact of a Veterans Administration hospital upon a local community. (2) That the committee be empowered to attempt to ascertain the source of VA hospital patients in Texas to determine whether they were or were not referred by private doctors. (3) That the Texas Medical Association urge the activation of committees in county medical societies to review grievances and alleged abuses regarding admissions to VA hospitals. (4) That the committee be empowered to study the laws and directives which authorize hometown care for service connected disabilities. (5) That the committee study H.R. 10028 (which would set the total number of VA hospital beds at 125,000 and provide for outpatient care for nonservice connected cases) and make recommendations to the Council on Medical Jurisprudence. (6) That the committee study the selective service act and its special provisions for selective call-up of physicians and make recommendations to the Council on Medical Jurisprudence. (7) That the Association reiterate its approval of physicians joining and participating in local veterans' organizations. (8) That the committee be empowered to study the operations of the Medicare program in Texas. (9) That factual information on the Veterans Administration system be included in the orientation program.

Nuclear and Atomic Medicine.—A second symposium plus exhibits on nuclear medicine is planned for the 1959 annual session. A directory of physicians qualified in nuclear and atomic energy is being published, and the Flying Physicians Association is being encouraged to cooperate in any emergency medical program. Consultant physicists have been designated.

Industrial Health.—It was suggested that the Association sponsor a symposium on occupational health programs for hospital employees and guiding principles for industrial nurses during the annual session in San Antonio. This was referred to the Council on Scientific Work. The Committee on Industrial Health requested approval of a booklet issued by the American Medical Association's Council on Industrial Health relating to the scope, objectives, and functions of an occupational health program. It also asked for recognition of an invitation for Texas to send a representative to the industrial health conference to be sponsored by the American Medical Association in February.

Workmen's Compensation.—No new cases of arbitration had been submitted to the Committee for Liaison with Workmen's Compensation Insurance Companies for review. A representative of the workmen's compensation insurance companies reported to the committee that no different interpretations on the workmen's compensation laws had been put into effect in the year since the new laws were passed.

American Medical Education Foundation.—Plans for a campaign for funds in November were announced by the Committee for American Medical Education Foundation. Mention was made of a Christmas card designed by Mrs. D. J. Sibley of Fort Stockton, wife of the Association's committee chairman, for the Woman's Auxiliary to use in raising funds for AMEF. Mrs. John D. Gleckler of Denison, President of the Woman's Auxiliary, earlier had reported to the Executive Council that such cards are available upon order ($2.50 per box of 10) and that the Texas Auxiliary with a donation of approximately $14,000 last year had ranked first among all auxiliaries in the nation for contributions to AMEF. The committee called attention to the fact that last year Texas doctors gave about $31,000 to AMEF, only about $4 per capita, and that consideration should be given to the importance of the problem of giving financial support to the medical schools, to the attitude the Texas Medical Association should take, and to what should be done about it in the future.

Liaison with State Bar.—It is anticipated that an interprofessional code, for several years in the beginning stages, will be drafted in time for the Committee for Liaison with the State Bar of Texas to meet with a similar committee from the Bar in January and for a final draft to be acted on by the Association at its annual session in April and by the Bar at its convention in July.

Recognition.—The Executive Council voted appreciation to the Charles O. Finley and Company for hospitality the previous evening and to the central office staff for its help in staging the activities of the weekend. A number of visitors, including the president, president-elect, and a past president of the Woman's Auxiliary, were introduced.

January 25, 1959, was announced as the date for the next meeting of the Executive Council.

Dr. Ball Receives Practitioner Plaque

A pioneer physician and philanthropist, Dr. William Pinck Ball of Cleburne, who was elected as the Texas General Practitioner of the Year during the annual session of the Texas Medical Association, held in April at Houston, was presented with a bronze plaque during the Public Relations Conference, September 6, at the Association headquarters building in Austin.

Dr. Ball, at 87, has a record of more than 3,000 deliveries, the most dramatic birth occurring 35 years ago. Dr. Ball recalls that he went at midnight to the house of a Johnson County tenant farm family, and after delivering the baby, he discovered the infant was suffering from hemophilia. He returned to his office, got the proper instruments, and returned to the farm house, where he drew blood from the father and injected it into the baby boy's hip. The child recovered and grew to maturity.

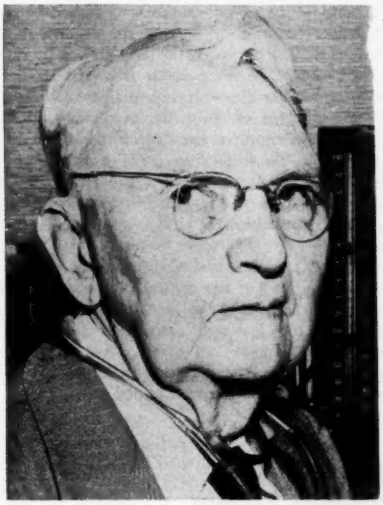
The son of Dr. John T. Ball, a physician in Johnson County before the days of the stethoscope or thermometer, Dr. Ball never wanted to be anything but a doctor. Even when he was a child other children called him "Doc." Following his graduation from Baylor University at Waco in 1892, he taught school during the winter and farmed during the summer to raise money to go to medical school. He was graduated from the Memphis Hospital Medical

College in 1899 and interned at Memphis City Hospital from 1899 to 1900.

Beginning his practice at Cleburne in 1900, he was a horse and buggy doctor. When the weather did not permit a buggy, he continued on horseback. He gave the first diphtheria antitoxin ever administered in Johnson County.

Dr. Ball's day begins at 5:30 each morning. He has breakfast at 6 and is ready to open his office at 7 o'clock. In the past 5 years, he has slowed down considerably, giving up obstetrics and surgery but still continuing his regular office hours, making hospital calls, and caring for home patients as he has done throughout his nearly 60 years of practice in Cleburne.

In 1941 Dr. Ball established a scholarship fund of $25,000 for male medical students at Baylor University. He has added to the original investment since that time, and the fund now totals $175,000. Scholarship recipients now include both medical and nursing students. These scholarships have made it possible for 21 boys and 4 girls



DR. WILLIAM P. BALL

to complete careers in the field of medicine. Currently, scholarships have been awarded to 10 men students of medicine and 2 women nursing students. As a memorial to his father, Dr. Ball established and is maintaining the nursery in the Johnson County Memorial Hospital.

Despite his time-consuming medical practice, Dr. Ball has kept active in civic affairs throughout the years. Having served as alderman of Cleburne for 4 years, he was also a member of the Cleburne Chamber of Commerce, a director of the Cleburne Savings and Loan Association, and director of the Cleburne Lime Stone Products Company. He is a deacon of the First Baptist Church and a member for more than 20 years of the Cleburne Lions Club. He has been active in the Masonic Lodge for more than 50 years and was named an honorary Kiwanian. He also has stock farming interests. He is especially proud of a greetings award from the University of Tennessee for 50 years' loyalty and service and of the Selective Service Medal from the Congress of the United States with the signatures of President Franklin D. Roosevelt and President Harry S. Truman.

Dr. Ball's practitioner plaque was presented to him by another Cleburne physician, Dr. R. W. Kimbro, chairman of the Texas Medical Association's Board of Trustees.

★ Woman's Auxiliary

Displays Guide Thinking Of Woman's Auxiliary At School of Instruction

Exhibits, skits, and motion pictures depicted the work of the Woman's Auxiliary to the Texas Medical Association at its School of Instruction on Thursday, September 4, in the Association building in Austin. Mrs. Harold Lindley of Pecos presided over the approximately 100 women representing county auxiliaries and state committees who were in attendance.

Introducing the comprehensive Auxiliary program discussed during the day, Mrs. F. Paul Burow, Killeen, displayed two large umbrellas printed in bold letters with the names of the various projects. Then came the individual presentations.

Reporting for the American Medical Education Foundation, Mrs. C. L. Gary, Corsicana, said, "As of the American Medical Association meeting in June, the Texas Auxiliary ranked at the top of all states in the amount of money contributed (more than $13,000)." She showed a huge poster depicting ways that Texas county auxiliaries had raised funds. These ranged from sympathy cards in Liberty County, through fruit cake sales in Grayson County, to a silver tea in Harris County. She also invited everyone to buy the Christmas card issued by the Auxiliary.

Mrs. Travis Smith, Abilene, explained the carefully considered public relations role of a physician's wife and directed attention to a three panel exhibit. Mrs. Smith recommended improved telephone manners at home, practice of good public relations at parties, and participation in civic activities.

A British film on the H-bomb focused attention on the need for training in preparation for survival in the nuclear age. Mrs. G. Bedford Brown, Angleton, and Mrs. Russell Deter, El Paso, dramatized civil defense, appearing disguised as Negro servants to hang on a clothes line bright red garments inscribed with pointers and suggested projects which the women explained as they worked.

Mrs. William D. Nicholson, Freeport, first vice-president, assisted by five regional vice-presidents, used a black felt board upon which they fitted a map of Texas. Each vice-president arranged her own regional section to complete the map, which was colored to symbolize certain stages of organizational progress. This team also built a six point star before the audience to show six principal duties of their office.

A plea for closer reading of legislative data mailed to doctors and wives was made by Mrs. G. G. Zedler, Austin. She announced a legislative symposium to be held in Austin January 24, 1959.

Those attending the session saw one of several mental health motion pictures that are available on loan from the Memorial Library of the Texas Medical Association.

Mrs. Paul Klinger, San Antonio, called attention to Governor Price Daniel's proclamation of October 13-19 as Nurse Week and to the next convention of the Texas Association of Future Nurses, scheduled for Galveston, March 20-21, 1959.

"There is nothing better for public relations than to contact high school science teachers and take them literature on science fairs," Mrs. Charles Cornwell of Marlin stressed. Wayne Taylor, Ph.D., of the University of Texas

Division of Extension, Austin, and coordinator of science fairs, commended the auxiliaries for sponsoring such fairs. He showed slides of science fair participants and the five or six year progress of some of the winners. He called attention to pamphlets of information on science fairs and recommended *Science News Letter* and *Scientific American* for general news of science.

The historian, Mrs. T. J. Archer, Austin, made a graphically illustrated speech about the awards that county auxiliaries may earn.

Using an exhibit portraying the services of the Association's Memorial Library, Mrs. S. W. Bohls, Austin, stressed the needs of the Library and urged financial support of it by auxiliaries. Other philanthropic funds of the Auxiliary

A combination of work and play were on the list of activities at the Woman's Auxiliary School of Instruction held in Austin September 4-5. Among those participating were **(1)** Mrs. Russell Deter, El Paso, and Mrs. G. Bedford Brown, Jr., Angleton, shown at the line of civil defense "necessities" they had hung up in blackface a few minutes before; **(2)** Mrs. Harold Lindley, Pecos, who presided; **(3)** Mrs. Travis Smith, Abilene, who looks over her exhibit on public relations, one of the many Auxiliary projects on display; **(4)** Mrs. Robert Snider, Austin, who modeled clothes styles of the roaring twenties at the Auxiliary dinner; and **(5)** some of the Austin hostesses who kept coffee and cookies rocketing to doctors' wives during the two days of meeting.

—Memorial Fund and Student Loan Fund—were explained by Mrs. Ramsay Moore, Dallas, and Mrs. Robert Blair, Houston, respectively, each of whom urged contributions. Mrs. Moore told of three women now receiving help from the Memorial Fund, and Mrs. Blair stated that 64 medical students currently are benefiting from loans.

Publications of special interest to the Auxiliary, the *Bulletin* of the AMA Auxiliary, *Today's Health*, the *Texas State Journal of Medicine*, and the *News Letter* of the Texas Auxiliary, came under scrutiny by means of exhibits. A large replica of the *News Letter* showed the mechanics involved before it reaches the recipient. Newspaper clippings of value to the *Journal* and other departments of the Texas Medical Association were outlined and Auxiliary members invited to supply them, labeled with name and date of newspaper. Reading of the *Bulletin* and wide distribution of *Today's Health* were urged.

Accidents are a problem in behavior, Mrs. Haskell D. Hatfield, El Paso, quoted safety experts as agreeing. She pointed to a need for uniform traffic codes for all states and of coordination of efforts in safety among all interested community agencies. Recently available automobile features such as safety belts and safety steering wheels were on display.

Mrs. O. W. Robinson, Paris, chairman for research and romance of medicine, asked for copies of any literature produced by or about southern physicians. Reference and revisions chairmen were at the School of Instruction with posters and answers to questions that might arise in those areas.

An invitation was extended by Mrs. Thomas H. Diseker, San Antonio, for Auxiliary members to attend the 1959 state convention in San Antonio, April 18-21.

Round-table discussions concluded the business of the day. Representatives from county auxiliaries met in three groups according to size of auxiliary, while state vice-presidents and council women and state committee chairmen also met to discuss pertinent problems. Each of the county groups considered at least three problems: how to keep harmony and maintain interest among varying types of members, how to encourage attendance, and what programs offer the best possibilities.

In the reporting session at which everyone heard summaries of the group discussions, a number of helpful suggestions were noted. With respect to harmony, recommendations included a postcard survey of members for their suggestions, a program or entertainment honoring or of special interest to specific segments of the membership, and the deliberate breaking up of cliques by seating arrangements. Attendance might be improved, it was proposed, by choice of a convenient time of meeting, inexpensive meals or refreshments, and trimming of reports to single highlights. Programs should be planned well in advance and announced in a yearbook, out-of-auxiliary speakers add interest, and perhaps several affairs jointly with the doctors might be well received, the group reporters pointed out.

Luncheon was served at the Texas Medical Association building to those present for the School of Instruction, and a dinner was held at the Westwood Country Club that evening. A theme depicting the five eras since the Woman's Auxiliary was started was followed at the dinner, for which Mrs. Eugene Schoch of Austin was toastmistress. Members of the Travis County Auxiliary presented the program, which featured modeling of styles of the roaring twenties, depression thirties, GI forties, geophysical fifties, and future unlimited and exhibition dances typical of these periods.

—MRS. JAMES M. COLEMAN, Austin.

Executive Board Reviews Reports

Reports of officers and committee chairmen of the Woman's Auxiliary to the Texas Medical Association, many of them reflecting the developments in projects commended to those at the School of Instruction the previous day, were heard by the Executive Board at its fall session September 5 at the Association's building in Austin. The President, Mrs. John D. Gleckler, Denison, was in the chair.

The board adopted a resolution calling for increased efforts toward traffic safety, including more rigid enforcement of traffic laws and legislation to strengthen them.

Changes in the constitution of the American Medical Association's Auxiliary were mentioned by Mrs. Haskell D. Hatfield of El Paso, President-Elect, who attended the national convention in June. It was pointed out that the national delegation henceforth will be on the basis of 1 delegate per 300 doctor members of the AMA and that the committee structure has been simplified with some committees being renamed.

The President's report pointed up the importance of joint endeavor between medical societies and auxiliaries, mentioning that the School of Instruction and Executive Board meeting of the Auxiliary this year had been held immediately preceding the Association's Public Relations Conference and Executive Council meeting to permit greater participation of doctors' wives in these events, as well as in the Association's committee meetings during the week end. The President also underscored the value of visual aids at meetings in lieu of prolonged platform discourse.

Dr. Joe R. Donaldson of Lubbock, chairman of the Committee on Public Relations of the Texas Medical Association, appeared briefly before the board to invite attendance at the Public Relations Conference. C. Lincoln Williston of Austin, Executive Secretary of the Association, praised the Auxiliary on its record of accomplishment, particularly in public relations and legislation.

Upon the motion of Mrs. V. M. Longmire, Temple, the board adopted resolutions in appreciation of courtesies of the Travis County Auxiliary, Miss Hazel Casler and other members of the Texas Medical Association staff, Mrs. Harold Lindley of Pecos and others responsible for the School of Instruction, Mrs. Thomas H. Diseker of San Antonio and those planning the state convention there, and the President, Mrs. Gleckler.

The President entertained Auxiliary members at tea in the Headliners Club the afternoon of the board meeting.

Texas Women Head for Chicago

Mrs. John D. Gleckler of Denison, President, and Mrs. Haskell D. Hatfield, of El Paso, President-Elect, will represent the Woman's Auxiliary to the Texas Medical Association at the annual conference for state presidents, presidents-elect, and national officers to be held under sponsorship of the Woman's Auxiliary to the American Medical Association October 6-8 in Chicago. Mrs. Gleckler is scheduled to participate in a panel discussion in which she will tell of the Texas program to support the American Medical Education Foundation.

In discussing AMEF, Mrs. Gleckler will be reviewing the numerous methods used successfully by Texas women to secure the largest donation contributed by any state Auxiliary last year—almost $14,000—and plans already laid to exceed that total this year. Statewide Auxiliary project for AMEF is the sale of a specially designed Christmas card. This year's card bears a picture representative of West Texas designed by Mrs. D. J. Sibley of Fort Stockton, an artist member of the Auxiliary.

★ American Medical Association

Reorganization Plans For AMA Approved

The Board of Trustees of the American Medical Association approved several administrative realignments and the establishment of new divisions and positions as part of a plan for reorganization at its August meeting in Chicago.

New divisions established included business, law, communications, field service, and scientific publications. A division on council administration was established on a temporary basis.

Among the administrative realignments were the transfer of the editorial functions of *AMA News* and *Today's Health* to the Communications Division and centralization of all advertising, circulation, and printing activities in the Business Division. The activities of the committee on prepayment medical and hospital service and the committee on relations with the lay sponsored voluntary health plans have been taken over by a new committee on insurance and prepayment plans.

New positions established will be filled by Tom Hendricks, who will be the assistant to the executive vice-president, and Aubrey Gates, who will be the director of the Field Service Division.

Texan Appointed to AMA Board

C. Lincoln Williston, Austin, Executive Secretary of the Texas Medical Association, attended his first meeting of the American Medical Association's Public Relations Advisory Board, August 25-26, in Chicago, after recently being appointed as a member of the board. He and Bill E. Robertson, coordinator of public relations for the Texas organization, attended the public relations institute which followed the advisory board meeting.

★ District Societies

Need Stressed for Support Of Voluntary Health Plans

Dr. Howard O. Smith of Marlin, President of the Texas Medical Association, stressed the need of voluntary health insurance in addressing the District 6 Medical Society at its July meeting in Corpus Christi.

Dr. Smith, one of the opening speakers of the meeting, urged doctors to support the insurance industry, saying it was each doctor's responsibility to help keep down the cost of medical treatment by spreading it to everyone. Prepaid voluntary health insurance, Dr. Smith pointed out, relieves the nagging fear of many families that a serious illness will mean financial ruin.

Also speaking at the meeting were Bill Barnard of Dallas, chief of the Associated Press' Texas bureau, who spoke on the need for a better understanding between doctors and the press, and Bryan Block of Marshall, public relations director for the Borden Company.

Dr. Franklin W. Yeager of Corpus Christi, president-elect of the Association, presided at the meeting, with Dr. Harold E. Griffin, president of the Nueces County Medical Society, giving the welcome. Dr. Foy H. Moody of Corpus Christi introduced guests and visiting lecturers.

New officers for the district include Dr. John Chriss, president-elect, and Dr. Thelma Frank, secretary-treasurer. Dr. D. L. Riley is the district's president.

Brooke Staff to Present Program

Members of the medical staff of Brooke Army Hospital in cooperation with the American Cancer Society will present the program for District 4 Medical Society at its meeting October 19. The meeting, which is scheduled to start at 8:30 a. m. at the Cactus Hotel in San Angelo, is open to all doctors.

The morning's program will include "Coin Lesion of the Lung," Lt. Col. Thomas W. Hewlett; "Lymphoma—Hodgkin's and Lymphosarcoma," Col. Daniel J. Sheehan; "Carcinoma of the Stomach," Lt. Col. Norman M. Scott, Jr.; "Carcinoma of the Thyroid," Major Harry F. Hurd; and "Leukemia," Col. Leo J. Geppert.

Topics and speakers for the afternoon program will be "Precancerous and Cancerous Skin Lesions," Col. George Prazak; "Carcinoma of the Breast," Col. William W. Nichol; "Carcinoid," Major Robert H. Moser; "Multiple Myeloma," Col. Harold S. McBurney; and "Polyposis," Lt. Col. Edward H. Vogel, Jr.

Also included in the day's activities will be a luncheon, business meeting, and a talk by Dr. Oren H. Chandler of Ballinger, councilor of District 4.

The District 4 meeting follows the Shannon Lectureship in Medicine scheduled to be held in San Angelo October 18.

★ County Societies

Society Survey Shows Communication Methods

In disseminating information among their members, a problem that besets most county medical societies, a variety of solutions have been tried—some proving successful, others failing. Reports of a survey to county society secretaries show the telephone, personal letter, postal card, and personal contact as the most popular mediums used in communicating with members.

Among the methods listed, the telephone, used by most small county medical societies, and a combination of mail and telephone, used by many multiple-county societies as well as by large one-county societies, were the most successful. Notices posted on hospital bulletin boards and in local newspapers generally produced poor results.

In most societies which telephone their members, the secretary of the society or his personal secretary does the calling although in a few, the president has the duty. *Nolan-Fisher-Mitchell Counties Society* reports that its meeting sponsor calls the society members, and in *Jefferson County*, an attendance committee does the chore. The *Travis County Society* secretary reports that his society has had good success with the telephone exchange operator leaving a message with the doctor's secretary.

For special events or projects, many societies which usually send information to members by mail use the telephone. For this purpose, also, most society secretaries report handling the chore. In the large societies, however, groups of people take over this duty. In *Harris County*,

the Woman's Auxiliary has the project while in *Tarrant County* the committee concerned, such as the legislative committee, gets in touch with members.

Large Societies Use Mail

Routinely, mailings are used nearly exclusively by the larger societies. Many of the small one-county societies and medium sized multiple-county societies communicate by mail but sometimes in combination with the telephone. Postal cards are the most effective type of mail communication, as evidenced in the questionnaire responses, although personal letters are sent by many of the smaller societies. Many of the societies use a double postcard, one side with news regarding a meeting and the other to be returned saying whether or not the doctor will attend.

Harris, Tarrant, Dallas, Potter-Randall, and Travis County Medical Societies find that a monthly bulletin or journal, some financed by advertising, is the best way to keep in touch with the members of their large societies. Although answers from the questionnaire were not received from *McLennan and Bexar County Societies,* they also have similar bulletins as the ones mentioned. These publications give announcements of meetings, scientific articles, editorials, and society officers, as well as medical features. *Harris County Society* secretary says that when matters of importance come up, the medical jurisprudence and public relations board send out special mailings.

Bulletin Boards Fail

The societies which use the bulletin boards in local hospitals use them only to announce meetings, although a few place a variety of material on them. The *Nueces County Society* places on the bulletin boards news of conventions, bulletins from Texas Medical Association and American Medical Association, and announcements of postgraduate courses, secretaries, receptionists, and other medical assistants. The majority of societies, however, have not found the bulletin board method successful.

The majority of societies provide news concerning meetings and special events to the local newspapers with the hope of reaching the public primarily and with little expectation of attracting doctor readers, county society secretaries indicate. Several of the small societies offer no such service to the press. Members of *Potter-Randall Counties Society* can find out what happened at meetings they are not able to attend since a local newspaper reporter sits in on scientific meetings of the society in order to report them in the paper. *Nueces County Society* uses the newspaper to reach out-of-town physicians who may be interested in the society's meetings. *Dallas County Society* finds the newspapers helpful in reaching members as well as the public.

Work as a Group

The doctors of *Nolan-Fisher-Mitchell Counties Society* have learned that working in groups is helpful. This year a group of doctors in each town of the society volunteered to notify members of the meetings. *Smith County Medical Society* has found television a means of communicating with members and the public. *Harris County Society* reports that announcements at hospital staff meetings occasionally are useful for publicizing the society's meetings concerning vital issues.

"Nothing succeeds like trying many things," states the executive secretary of *Bexar County Medical Society.* "No one thing is always best. Hard work in promoting is the answer," he says.

Although most of the societies answering the questionnaire report that their present method of keeping in contact with members is successful, some comment that they have problems in getting their members to attend meetings. One society which does not have such trouble, however, is the *Austin-Waller Counties Society,* which the secretary reports as usually having 100 per cent attendance so that information can be transmitted easily at each meeting.

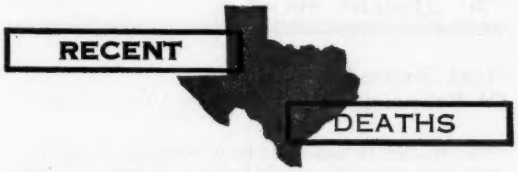
County Society News

Thirteen doctors and their wives attended the August 5 meeting of the *Pecos-Jeff Davis-Presidio-Brewster Counties Medical Society* in Fort Stockton. A resolution was adopted that the tumor clinic meeting be one of the annual meetings of the society. A discussion of "Malignant Tumors of the Uterus" was presented with accompanying slides by Dr. Charles L. Green, El Paso, pathologist; Dr. Gordon Black, El Paso, radiologist; and Dr. James R. Morgan, Bellaire, obstetrician and gynecologist.

At the recent meeting of the *McLennan County Medical Society,* members voted to have a new cover for their bulletin, upon the suggestion of Dr. Woodrow M. Avent, who had made a sample cover of a map of Texas with a snake in the background. Also, it was announced that all members had paid their dues for 1958. The society favored having a Isotope laboratory in Waco, under the sponsorship of Cooper Foundation in Waco. It will be located in the Hillcrest Hospital.

Grayson County Lectureship Set

Guest speakers for the third Blackford Memorial Lectureship of the Grayson County Medical Society will be Dr. M. B. Shimkin, National Institutes of Health, Bethesda, Md.; Dr. Leon D'Mochowski, M. D. Anderson Hospital and Tumor Institute, Houston; Dr. James Martin; and Dr. John V. Goode, both of Dallas. The lectureship will be held November 13 at Denison.



DR. CHARLES A. ROSEBROUGH, JR.

Dr. Charles Asher Rosebrough, Jr., Sweetwater, died June 8, 1958, of an acute coronary occlusion.

Born May 23, 1886, in St. Louis, Dr. Rosebrough was the son of Charles Asher and Ida (Hagaman) Rosebrough. He received his preliminary education in public schools in St. Louis and attended the St. Louis University. He was graduated from the St. Louis College of Physicians and Surgeons in 1914. Dr. Rosebrough served his internship at the St. Louis City Hospital and his residency at the In-

An obituary ordinarily will not be published more than four months after date of death. Cooperation in reporting deaths of physicians and in furnishing appropriate biographical material promptly is solicited.

DR. CHARLES A. ROSEBROUGH, JR.

firmary and Isolation Hospital of St. Louis. He had practiced in Sweetwater for 43 years.

Dr. Rosebrough was a member of the American Medical Association, Texas Medical Association, and Nolan-Fisher-Mitchell Counties Medical Society, previously serving as secretary and president of the county organization for several terms. He was a past director of the American Academy of General Practice. He also was a member of the Crippled Children and Heart Associations, a member of Phi Rho medical fraternity, past president of the Rotary Club, and a deacon of the Presbyterian Church. He worked with the Selective Service during World War II.

Dr. Rosebrough and the former Miss Florence May Noel were married June 1, 1915, in St. Louis. She survives, as does a son, Charles A. Rosebrough III of Lubbock; a sister, Mrs. Luther Hunt of St. Joseph, Mo.; and two grandchildren, Charles A. Rosebrough IV and Gail Rosebrough.

DR. JOHN L. BARNETT

Dr. John L. Barnett, San Antonio, died July 27, 1958, of embolism.

Dr. Barnett, who was born January 4, 1900, in Crockett, was the son of David Henry and Beulah (Lacy) Barnett. He attended Rice Institute, Houston, after receiving his preliminary education in Nacogdoches. He was graduated from the University of Texas Medical School in 1923. He served his internship at the Knickerbocker Hospital, New York, and his residency at St. Lukes Hospital, New York. He did postgraduate work at Tulane University, New Orleans; Cook County Hospital, Chicago; University of Pennsylvania, Philadelphia; and Lahey Clinic, Boston.

He practiced in Fort Worth and Ranger before moving in 1930 to San Antonio, where he remained until his death, except for several years when he served as captain in the United States Navy Reserves in Pearl Harbor and Corpus Christi.

Dr. Barnett was a member of the American Medical Association, Texas Medical Association, Bexar County Medical Society, and Southwest Surgical Congress. He was a fellow of the American College of Surgeons, formerly police surgeon for the San Antonio police force, a member of the surgical board and chairman of the Credentials Committee of Nix Memorial Hospital, and member of the staff of the Baptist Memorial Hospital and Santa Rosa Hospital, San Antonio. He also belonged to the Episcopal Church and San Antonio Country Club. His hobbies were golf and fishing.

Dr. Barnett and the former Miss Helen Louise Pyle of Toledo, Ohio, were married October 28, 1939, in San Antonio. She survives, as does a daughter, Miss Barbara Ann Barnett.

DR. GRANVILLE Q. ADAMS

Dr. Granville Quinn Adams, associate professor of clinical surgery at Baylor University College of Medicine, Houston, died July 29, 1958, of a heart attack.

He was born August 4, 1907, in Pocomoke, Md., and was the son of Albert Granville and Annie May (Quinn) Adams. Dr. Adams received his preliminary education in Pocomoke and was graduated from St. John's College, Annapolis, Md., in 1929 and Johns Hopkins School of Medicine, Baltimore, in 1933. He interned at the New York Hospital, New York, and was a resident at Lawrence Hospital, Bronxville, N. Y., and held positions at Lincoln Hospital and Hospital for the Ruptured and Crippled, New York. He did postgraduate study at the Lahey Clinic, Boston.

Since 1939, he has specialized in general surgery in Houston. He was lieutenant in the United States Naval Reserve from 1925 to 1941. He was the author of several scientific articles.

DR. GRANVILLE Q. ADAMS

Dr. Adams belonged to the Harris County Medical Society, Texas Medical Association, and American Medical Association. He was an organizer and past president of the Houston Surgical Society, a fellow of the American College of Surgeons, and a diplomate of the American Board of Surgery. He also was affiliated with the Postgraduate Medical Assembly of South Texas, Southwestern Surgical Congress, Southern Medical Association, and Texas Surgical Society. He was a member of the Phi Sigma

Kappa social fraternity, Phi Chi medical fraternity, Forest Club, Doctors Club, Episcopal Church, and Exchange Club, having served as president of the last organization.

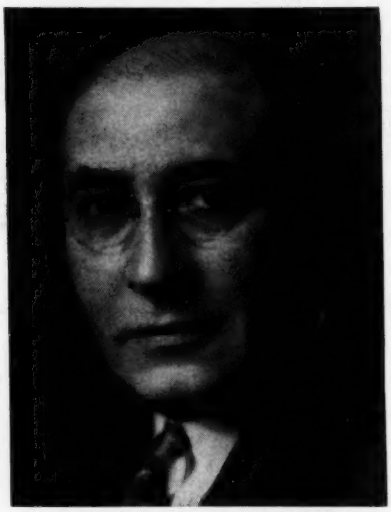
Dr. Adams received the Delta Omicron and Alumni Award for General Excellence at St. John's College, Annapolis, Md., the Algerion Sidney Sullivan Award at St. John's College, and in 1924, the Rotary Club award. His hobbies were pistol shooting, photography, and music.

Survivors include his wife, the former Miss Constance Stacy Brown, New York, whom he married January 26, 1942, in Houston; a daughter, Miss Victoria Adams; and his mother, Mrs. Albert G. Adams of Pocomoke, Md.

DR. HARRY R. LEVY, SR.

Dr. Harry R. Levy, Sr., Dallas, died August 21, 1958.

Dr. Levy was born September 15, 1888, in Stavisk, Russia. His parents were Mr. and Mrs. Bernard Levy. He received his preliminary education in Europe and attended New York University. He was graduated from Southwestern University Medical Department, Dallas, in 1910, and interned at Baylor Hospital in Dallas. Dr. Levy did postgraduate work at the Postgraduate Medical School, New York; Chicago Postgraduate Medical School, Chicago; and



DR. HARRY R. LEVY, SR.

New York Lying-In Hospital, New York; and Harvard Medical School, Boston. He served as first lieutenant in the Army Medical Corps in World War I. He practiced in Dallas from 1911 until his death specializing in diagnosis and general surgery.

He held membership in the American Medical Association, Texas Medical Association, Dallas County Medical Society, and International College of Surgeons. He belonged to the Dallas Athletic Club and Temple Emanu-El. He was a thirty-second degree Scottish Rite Mason, belonging to Tannehill Masonic Lodge and Hella Temple Shrine.

Dr. Levy and Miss Myrtle Myers were married June 16, 1920, in Houston. She survives, as do two children, Mrs. James H. Cerf of Corsicana, and Harry R. Levy, Jr., D.D.S., of Dallas, and three brothers, Milton B. Levy, Maurice W. Levy, and A. Z. Levy, all of Dallas.

DR. GEORGE D. MAHON, JR.

Dr. George Dixon Mahon, Jr., Dallas, a founder of the American Board of Surgery, died August 4, 1958, after a long illness.

Dr. Mahon was born October 14, 1892, in Marshall, and was the son of Dr. George Dixon, Sr., and Linnie (Scott) Mahon. He attended the Peacock Military Academy at San Antonio and Brenham and Hughes Junior College at Spring Hill, Tenn., and in 1913, he received a degree in medicine from Vanderbilt University Medical School, Nashville.

He served his internship and residency at St. Mary's Hospital in Milwaukee. After practicing a year in Marshall, he went to the Mayo Clinic, Rochester, Minn., where he remained for 7 years and obtained a degree of master of science in surgery from the University of Minnesota. In 1923 he came to Dallas and became chief of Baylor Hospital. In the early 1930's, he joined the staff of Medical Arts Hospital, and remained on the staff until his retirement in 1950.

A member of the Texas Medical Association, American Medical Association, Dallas County Medical Society, Southern Surgical Association, and American Goiter Association, Dr. Mahon was a fellow of the American College of Surgeons. He was affiliated with the National Aeronautic Association, Dallas Gun Club, Dallas Athletic Club, Dallas Athletic Country Club, and Phi Beta Pi social fraternity. In 1937 he became the first alumnus of Vanderbilt to receive honorary membership in Alpha Omega Alpha honorary fraternity for doctors.

Dr. Mahon, who had been active in aviation since 1930, was founder and owner of the Dallas-Garland Airport. He also owned farms in Dallas and Harrison Counties. His hobbies included guns and fishing.

Surviving is his wife, the former Miss Elizabeth C. Williams of Mount Pleasant, whom he married May 22, 1942, in Mount Pleasant.

DR. R. C. CURTIS

Dr. Richard Carleton Curtis of Bonham died May 28, 1958, in a Houston hospital of infarction in the right cerebral hemisphere.

Dr. Curtis was the son of Dr. Charles M. and Willie Green (Fullerton) Curtis. A native of Georgia, being born there January 23, 1890, he attended Georgia Military Academy at College Park, was graduated in pharmacy at the Southern College of Pharmacy in Atlanta in 1908, and received his degree in medicine from Atlanta Medical College (Emory University) in 1915. After serving an internship in pathology at Atlanta Clinical Laboratory, Dr. Curtis became pathologist at King's Daughters Hospital, Temple. In 1917 he was called into military service as a first lieutenant in the Army Medical Corps and, after a brief period in this country, went overseas to France and Germany. He returned to Texas in 1919 as clinical pathologist and roentgenologist in Corsicana, where he remained until 1939. Then he went back to King's Daughters Hospital and Clinic in Temple as director of the x-ray department. From 1951 until his death he was chief of the radiological service at the Veterans Administration Hospital in Bonham.

A member at various times of Bell and Navarro County Medical Societies, Dr. Curtis had been president and secretary of the Navarro organization. He also had held a place

of trust in the Texas Medical Association, being secretary of the Section on Radiology and Physiotherapy for the 1929 annual session. He belonged to the American Medical Association and Radiological Society of North America, had been president of the Texas Radiological Society, was a fellow of the American College of Radiology, and was a diplomate of the American Board of Radiology. He was a Baptist, Mason, Shriner, and formerly president of the Rotary Club at Corsicana, president of the board of education at Temple, and chairman of the Community Chest at Temple.

Dr. Curtis and Miss Madie E. Thompson were married September 12, 1921, in Corsicana. Mrs. Curtis survives, as do two children, William Masten Curtis, Sherman, and Mrs. Patsy Curtis Greene, Sweeny; a brother, Dr. W. L. Curtis, College Park, Ga.; and a sister, Mrs. John Stiles, Ruston, La.

DR. KENNEDY A. MILBURN

Dr. Kennedy Abbott Milburn, San Antonio, died May 14, 1958, at Boston of a cerebral embolism, the result apparently of injuries received in a horseback riding accident some weeks before.

Dr. Milburn was born August 11, 1904, at San Antonio to Conn L. and Mary E. (Abbott) Milburn. Receiving his preliminary education at San Antonio, he later attended Texas Agricultural and Mechanical College at College Station and Duke University at Durham, N. C. He also attended Baylor University College of Medicine at Dallas, being graduated in 1930. He served his internship at Robert B. Green Memorial Hospital at San Antonio (later serving on the staff of this same hospital) and did postgraduate work at the Mayo Clinic, Rochester, Minn. He was in general practice at San Antonio from 1931 until 1958.

A member of the Bexar County Medical Society and the Texas Medical Association, he also belonged to the Southern Medical Association, the American Proctologic Society, and the American Medical Association. Dr. Milburn also held membership in the First Presbyterian Church, the San Antonio Chamber of Commerce, Phi Alpha Sigma fraternity, the German Club, and the Order of the Alamo. He was in the organized reserves from 1930 to 1942. His hobbies were hunting and fishing, and he was also a member of the San Antonio Country Club and the Bird Dog and Quail Club.

He married the former Miss Ann Lewis at San Antonio June 29, 1933. She survives as do three children, Kennedy, Jr., Susan, and Mollie; his mother, Mrs. Conn L. Milburn; five brothers, John D. Milburn of Houston; Dr. Graham Milburn and Phillip Milburn, both of San Antonio; Malcolm Milburn of Austin; and Conn L. Milburn, Jr., of London, England; and two sisters, Mrs. Mirian White of New York and Mrs. Helen Maxwell of San Antonio.

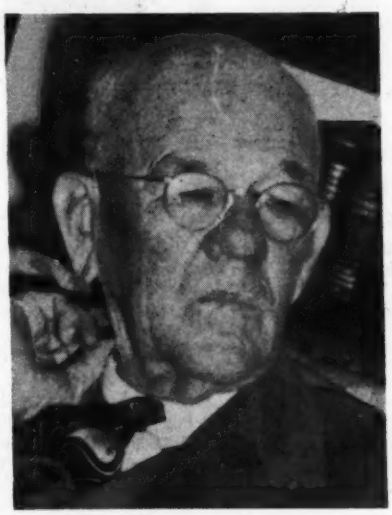
DR. KENNEDY A. MILBURN

DR. MONROE L. ALEXANDER

Dr. Monroe Lafayette Alexander of Canutillo died July 16, 1958, of pulmonary edema.

Born at Prescott, Ark., on July 19, 1876, he received his preliminary education at Cross Cut and Brownwood, later attending the Daniel Baker College at Brownwood. He was graduated from the Fort Worth University Medical Department at Fort Worth. He practiced in Brown, Tom Green, Coleman, Pecos, Schleicher, Runnels, and Val Verde Counties before going to Mexico in 1910 and Arizona in 1917 with the American Smelter and Refining Company. In 1922 he went to Canutillo, where he specialized in obstetrics. He was assistant health officer of El Paso County from 1939 to 1954.

A member of the El Paso County Medical Society, Dr. Alexander was elected an honorary member in the Texas Medical Association in 1948. He was also a member of the Southwestern Medical Association, American Medical Association, Woodmen of the World, and Baptist Church.



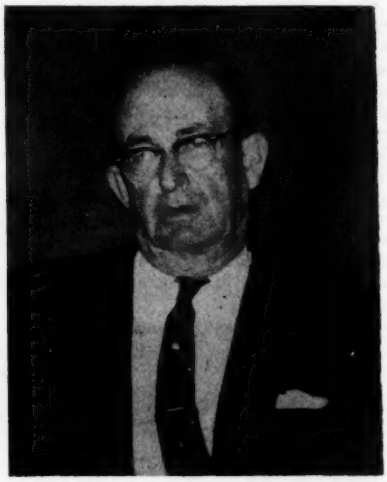
DR. MONROE L. ALEXANDER

Members of the family who survive include two daughters, Mrs. Jamie Scott of Canutillo and Mrs. Hazel Holt of Tucson, Ariz.; a brother, W. O. Alexander; and three sisters, Mrs. Joah Campbell, Mrs. L. M. Hoover, and Miss John Alexander, all of Eldorado; four grandchildren; and six great-grandchildren.

DR. HENRY W. MAIER

Dr. Henry W. Maier, Greenville, was killed instantly when his automobile was in collision with a street sweeping machine July 17, 1958.

The son of Peter and Frances Maier, Dr. Maier was born June 14, 1888, in Farmersville. After attending Quinlan High School, Tyler Business College, and East Texas State College at Commerce, he was graduated from Baylor University College of Medicine, then in Dallas, in 1915. During this period he worked as a telegrapher for a railroad. He served an internship at Parkland Hospital, Dallas, and later did postgraduate work in urology in New York. From 1915 to 1917, Dr. Maier practiced in Hugo, Okla. Then he was stationed in New York as a first lieutenant and later captain with the Army Medical Corps until 1919, when he moved to Greenville.



DR. HENRY W. MAIER

A member of the Texas Medical Association through the Hunt-Rockwall-Rains Counties Medical Society, Dr. Maier had belonged to the American Legion for 40 years and the Masonic Order for 28 years. He also was a member of the Lions Club and the Methodist Church.

Dr. Maier's wife, the former Mrs. Jamie King Carroll, whom he married May 10, 1916, in Dallas; a son, Henry W. Maier, Jr., Dallas; a daughter, Mrs. J. F. Adkisson, Greenville; his mother, Mrs. Peter Maier, Greenville; and four sisters, Mrs. W. P. Philips, Miss Ethel Maier, and Miss Jim Maier, all of Greenville, and Mrs. E. P. Goode, Terrell, survive.

DR. CHARLES F. MARES

Dr. Charles Francis Mares, Galveston, died June 2, 1958, of a heart attack.

He was born November 19, 1904, in Katy, the son of Charles Francis and Kathern (Kolaya) Mares. He attended public school in Galveston and was graduated from the University of Texas, Austin, and in 1928 from the University of Tennessee School of Medicine, Memphis. He served his internship at John Sealy Hospital, Galveston.

He was instructor in medicine at the Unviersity of Texas Medical Branch for 2 years and instructor in surgery for 9 years. He became county physician in 1942 and remained in that position until 1951, when he moved to Kerrville. At that time, he was presented with an engraved plaque by the commissioners court in recognition of the more than 2,000 major operations he had performed on county patients. Several years ago Dr. Mares returned to Galveston to enter private practice and last summer again was named county physician.

Dr. Mares was a member of the American Medical Association and Texas Medical Association through Galveston County Medical Society. He also was a past member of Kerr-Kendall-Gillespie-Bandera Counties Medical Society, a fellow of the American College of Surgeons, and a member of the Catholic Church.

Survivors include his wife, the former Miss Inez Taber of Dallas, whom he married September 9, 1936, in Dallas; two children, Mrs. Joe Bob Wilson of Dallas and Charles F. Mares III of Galveston; and a sister, Mrs. Julia Dellanera of La Marque.

DR. LEROY TRICE

Dr. Leroy Trice of Palestine died July 7, 1958.

Born June 13, 1907, in San Antonio, Dr. Trice was the son of Marvin H. and Lillian (Anderson) Trice. He received his preliminary education in San Antonio and was graduated from the University of Texas, Austin, in 1929 and the University of Texas Medical Branch, Galveston, in 1931. He interned at Robert B. Green Memorial Hospital in San Antonio, and was in general practice in Palestine from 1932 to 1957, part of the time as house surgeon for the Missouri Pacific Lines Hospital.

Dr. Trice was a member of the Texas Medical Association, American Medical Association, and Anderson-Houston-Leon Counties Medical Society. He also was a fellow of the American College of Surgeons, and a member of the Chamber of Commerce, Presbyterian Church, and Phi Beta Kappa.

Dr. Trice and Miss Mackie Presley of Palestine were married April 25, 1953, in Arlington. She survives, as do his mother and his brother, Marvin H. Trice, Jr.

DR. LEROY TRICE